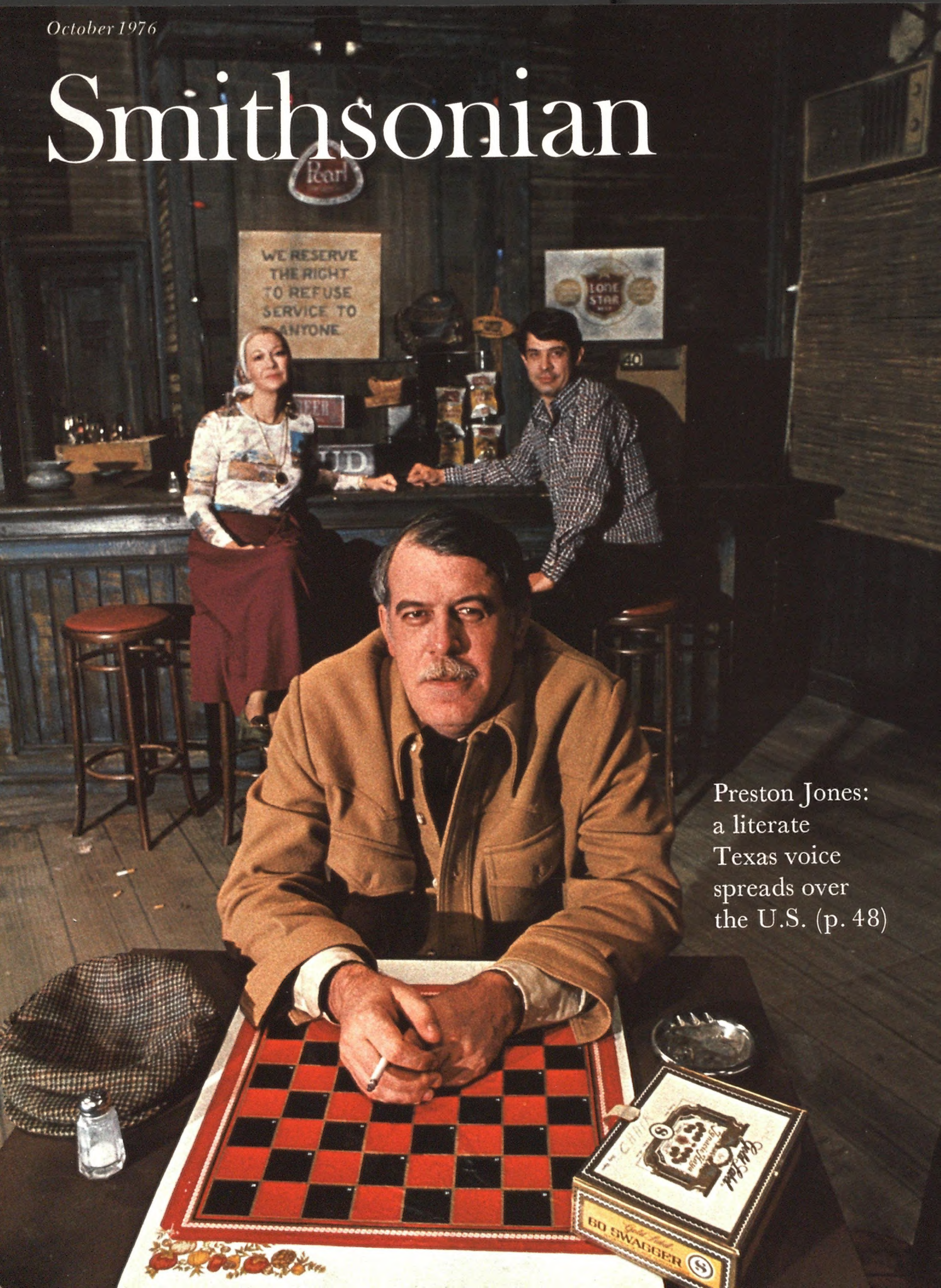
October 1976

Smithsonian



Preston Jones: a literate Texas voice spreads over the U.S. (p. 48)

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October 1976 Volume 7, Number 7

Smithsonian

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Table of Contents

COVER: Playwright Preston Jones sits in front of members of the cast in a barroom scene from *Lu Ann*, one of the three full-length plays in his powerful *Texas Trilogy* Photograph by Yoichi R. Okamoto

6 The view from the castle: Secretary Ripley's comments

12 Phenomena, comment and notes by James K. Page jr.

24 Letters to the Editor

32 Around the Mall and beyond by Edwards Park

40 The 'fixed' life-span of humans is neither absolute nor immutable—we may learn to live for centuries
Text by Albert Rosenfeld,
Illustrations by Kinuko Y. Craft

48 The classic family drama is revived with humor and sensitivity in Preston Jones' *Texas Trilogy*
Text by Tom Prideaux, photographs by Yoichi R. Okamoto

58 An early journey on the wild Missouri by a royal naturalist and a great painter inspired a year-long record of Plains Indian life, customs and combat
Journal by Alexander Philip Maximilian,
Paintings by Karl Bodmer

70 How a post office can also be the heart of a village
Text by Jane Holtz Kay,
Color photographs by Marvin E. Newman

80 Neon, Smithsonian finds, is a dazzling thing to collect
By Peggy Thomson

86 A comprehensive exhibition of art by blacks, developed from the days of slavery, starts a cross-country tour
By David C. Driskell

94 Armed with a smash-hit international circus, Spain's Nation of Boys sets out to conquer the world
Text and photographs by Tor Eigeland

104 A recent resurvey of Asian wildlife indicates the best hope for the endangered may be zoolike refuges
Text by S. Dillon Ripley,
Photographs by Jehangir Gazdar

114 John Stevens, the genius who built the first U.S. steam carriage, worked to devise a new transport system
By Keith Wheeler

126 Bloomers and blouses, plus waving alpenstocks
Text by Dolly Connelly, photographs by Asahel Curtis and Charles Finley Easton

132 Sequel: Rescue of the ancient temple of Borobudur

134 The strange adventures of Lafayette's stolen watch
By Silvio Bedini

144 Book reviews

156 Additional reading

159 Picture credits

160 October events at the Smithsonian

166 Smithsonian tours

168 Pie in the eye is fun—for somebody else
By Patrick Ryan

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Secretary Ripley's comments

The view from the castle

Our Bicentennial effort, to all intents and purposes, is waning. Was it worthwhile? An outpouring of goodwill proves that it was

The haze of autumn has descended on the Mall. The marks left by the summer's Folklife Festival are being tidied by the tidy-minded. The grass is resown, the litter picked up, and soon no one will know that multitudes have tramped all season long from tent to plastic dome, from barn to tee pee, viewing the demonstrations of ethnicity by peoples from the Americas, Africa, Europe and Asia celebrating their diversity.

It's like the end of a country fair. Starlings and sparrows descend to search for leavings. The rats and raccoons wait till dusk. A pair of mallards skirts the Reflecting Pool. In the renewed silence, marred only by the persistent background rumble of the planes landing at and taking off from National Airport, we stroll along the edge of the trees, on this year's new, dusty gravel paths—ruled straight for seeming miles, inexorably inhuman. (Why, oh why, is all design in Washington so relentlessly monumental, laid out as if from on high, from helicopters, by anonymous people who never walk here? What is there about us that makes us wish to sanctify our capital, and stretch out vast panoramas of sunbaked grass, on which people stroll at their peril, as though on a desert?)

Walking into the museums, we wonder. Was it all worth it? Here are the superb exhibitions, created over the years for this one great burst of activity, the Bicentennial summer. One after the other they lie there in their splendor, less visited now, for the tourists have dwindled with the leaves of autumn. The catalogs lie on the shop counters, packed with information, with all the outpourings of scholarship to make them historically accurate. They are redolent of a time or of a theme, each one a monument to effort and good work. Now they repose on thousands of shelves across the continent, or on coffee tables, silent. Do they reproach us for trying so hard? Or will they carry a meaningful message to others, to students in a hundred schools?

What is the lesson of ten years' effort on a Bicentennial? As Washington wrote from Valley Forge to the Continental Congress (paraphrased in the musical play *1776*):

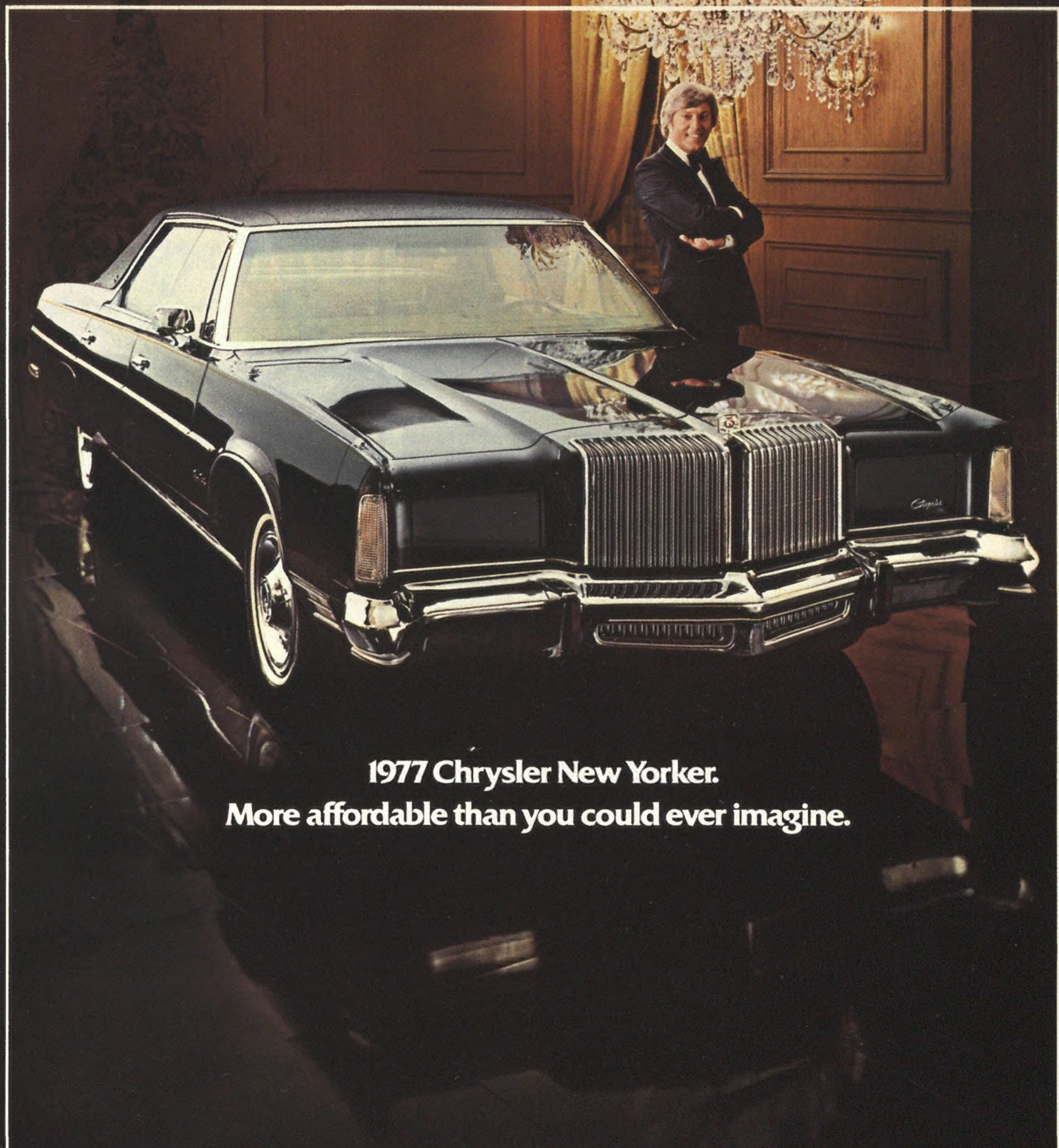
Is anybody there?
*Does anybody care?**

I think they do. I think it was worth it. The national outpouring of goodwill, of élan, was visible to us as never before in the great exhibits: "1876" with its evocation of the drive and forcefulness of a hundred years ago, expressed in the wild panoply of Victorian design; the National Air and Space Museum, a glorious building, a testament to inventiveness; this year's Folklife Festival, a "spectacular" coached into existence over ten years to culminate in a vast outpouring of affectionate regard for people. The Duc de La Rochefoucauld-Liancourt, in his *Voyage*, wrote of his visit to Washington in April 1797, that Americans lacked the kind of public spirit that inspires people to sacrifice personal interests to national interests for the sake of promoting a great national project.

This past summer would have proved him unprophetic if the statement had been more recently made. The scars of the recent past are healing fast and, as always, Americans seem to be looking ahead.

S. Dillon Ripley

* From the song, *Is Anybody There?*, from the musical *1776* (based on a conception of Sherman Edwards); book by Peter Stone, music and lyrics by Sherman Edwards. © 1969. Reprinted by permission of The Viking Press.



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The Smithsonian National Associates constitute the first broadly based membership group in the Institution's 130-year history. Established in April 1970, the National Associates program seeks to present as much as possible of the Smithsonian's resources to a wide audience, through the pages of SMITHSONIAN magazine and through associated educational activities.

Today there are more than 1.2 million National Associates, including some 40,000 Resident Associates, members in the Washington area. Together the Associates add a vital private resource to the public support of the Smithsonian and serve in themselves as spokesmen for the Institution's principal mission. As defined by James Smithson, the English scientist and philanthropist who founded the Institution and gave it its name, this mission is ". . . the increase & diffusion of Knowledge among men."

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. . . Develop a more lively curiosity about ourselves, the natural world around us, and the laws which govern it.

. . . Increase appreciation of our human heritage through a better understanding of our links with the past, from which we can learn the lessons of history and the great ideas which have guided human destiny.

. . . Encourage a more positive view of the underlying purposes of our lives which will make us better citizens of an increasingly interdependent world.

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For the National Associates Board,
George C. McGhee, Chairman

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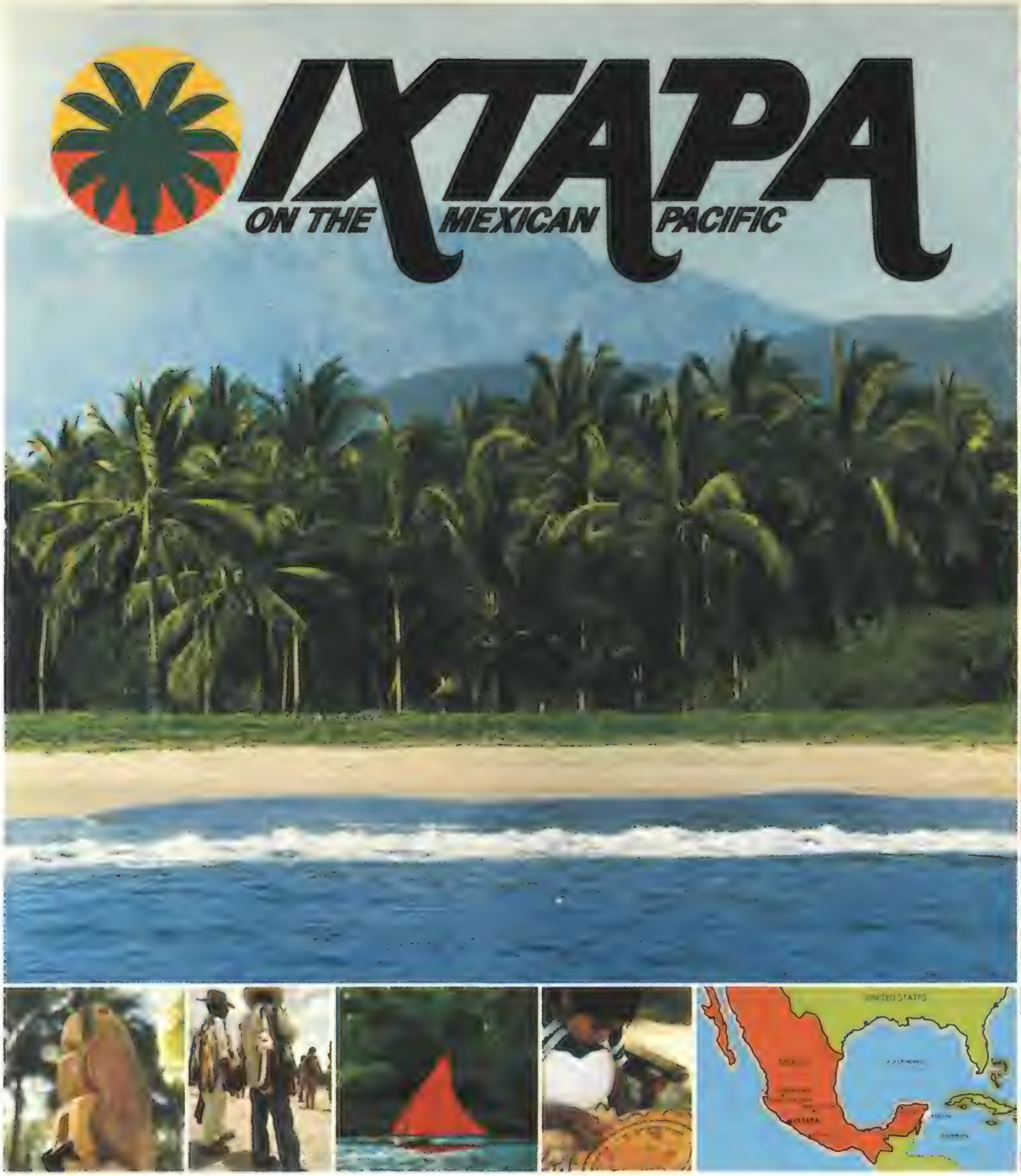

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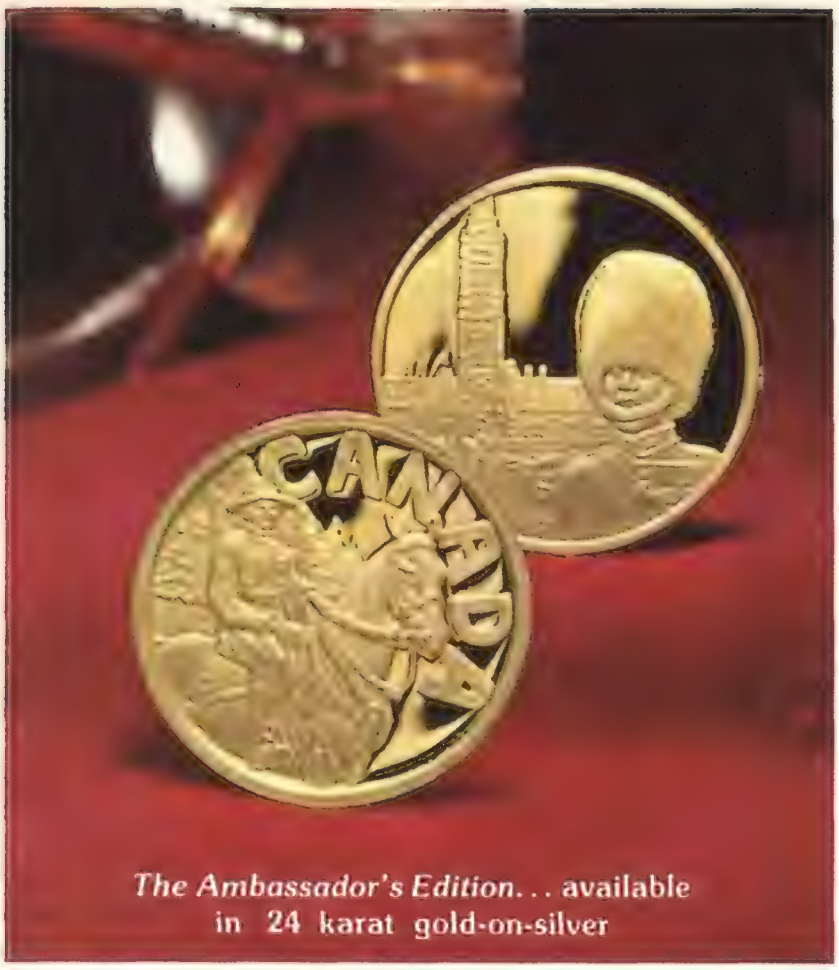

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Phenomena, comment and notes

The dog star of the Dogon, dentists as hawkshaws, dinosaurian blood pressure, and the magnetic bunting

While the moon and Mars and the make-up of the genetic code fall before the inquisition of science, the migratory ability of many creatures such as birds remains one of nature's most mysterious as well as marvelous phenomena. As Charlton Ogburn pointed out in the September issue, the sheer distance tiny birds can travel is almost unimaginable. How they navigate so precisely is yet another marvel. Experiments over the years have shown that some bird species apparently have, somewhere in their much maligned brains, a genetically coded idea or template of the pattern of stars in the night sky. Change the pattern experimentally—by rotating a planetarium sky over a birdcage—and these birds adjust their direction accordingly.

To one who has trouble remembering where Orion's "belt" is, this seems remarkable enough. What is harder to imagine is a sensory system altogether lacking in humans. Experimental evidence has accumulated to indicate that some birds may be responding to the Earth's magnetic field (though much skepticism greeted the experimenters' final results).

Now a group of German and American scientists report in *Science* (Volume 198, Number 4252) on some more conclusive evidence. It concerns the indigo bunting—that splendidly blue songbird which has previously demonstrated the advantages of polygyny (SMITHSONIAN, March 1976) and which has also been found in

the course of earlier experiments to make use of stellar clues in the selection of its migratory direction.

Put in cages carefully constructed to minimize visual cues, the birds were found to seek perches in the appropriate migratory direction. When a magnetic field (created by electrical coils) equivalent to that of the Earth's was deflected 120 degrees clockwise, the buntings, in statistically significant fashion, adjusted themselves accordingly—heading east-southeast rather than north.

QED, birds can detect the magnetic field and use it as another aid in their navigation. The intriguing question—how?—remains.

The evidence of teeth

Speaking of matters forensic, one learns from *American Scientist* (Volume 64, Number 4) that the first man convicted of murder by dental evidence was a Harvard professor of medicine who knocked off a philanthropist and got rid of the body in the medical school's incinerator. This was in 1850 and his conviction resulted from evidence supplied by the philanthropist's dentist that the object found in the incinerator was the victim's dentures. The dentist was subsequently made Harvard's dean of dentistry, serving, one also imagines, as a live-in deterrent to any other homicidal scholars in Cambridge.

In any event, according to Reidar F. Sognnaes, a professor of anatomy and oral biology at the University of California in Los Angeles, forensic dentistry has come a long way since 1850. Teeth and other dental remains are just about as individual as fingerprints (and they last through fires); even identical twins often differ dentally. One can sometimes determine a person's occupation, says Dr. Sognnaes, from teeth. A carpenter's teeth, for example, may show ridges from holding nails in the mouth. Criminals have been identified because they left bite marks behind in half eaten apples or, far more frequent, in terrified victims.

There is current interest, it seems, in labeling all dental restorations—bridges, dentures, individual teeth—with "a tombstone-like filling smaller than a pinhead which bears a 'name and address' and can be located by X rays."

By way of showing forensic dentistry's power, Dr. Sognnaes (who did some nice detective work on George Washington's

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false teeth, SMITHSONIAN, February 1973), lays to rest the persistent rumors concerning two less admired political figures.

By examining the Russians' autopsy report and a German dentist's records, Dr. Sognnaes confirms that it was indeed Hitler's body the Russians autopsied and that *der Fuehrer's* remains are not still somewhere in his demolished bunker in Berlin. And the same goes for his right-hand man, Martin Bormann. The same dentist's records accord well enough with a skull unearthed three years ago near a West Berlin railroad station to make Dr. Sognnaes and the West German government certain that Bormann is not hobbling around South America but instead died, an apparent suicide, when the Russian forces invaded the city.

Violence in America

As everyone suspects, violence is on the increase in the United States. Just how far we have come on the road to mayhem was the subject of some carefully calibrated research by Dr. J. Lawrence Angel, a physical anthropologist at the Smithsonian's National Museum of Natural History. His analysis of the remains of 82 Colonial and early 19th-century skeletons and of 188 modern-day skeletons showed that today's white males are twice as prone to bone fractures as their forebears. Worse, modern white males suffer four times as many head fractures as their Colonial counterparts.

Dr. Angel admitted that his sample of modern skeletons might be a bit skewed, since the great proportion of them were referred to him by law enforcement agencies (the department does a brisk business in forensic anthropology for outfits like the FBI). Whether his sample was askew or not, Dr. Angel attributes the problem to automobile and household accidents, athletic injuries and interpersonal conflict—all of which have been on the rise since the settling of the nation.

There were a few other surprises in the study. Contrary to general belief, stature has increased only slightly. Improved nutrition has had only one noticeable effect: our pelvises are deeper than those of our forebears. But our teeth are worse. There has been a 50 percent increase in dental disease over the centuries—the result Dr. Angel says, of eating more sugar and "less real meat and fish protein containing fluoride."

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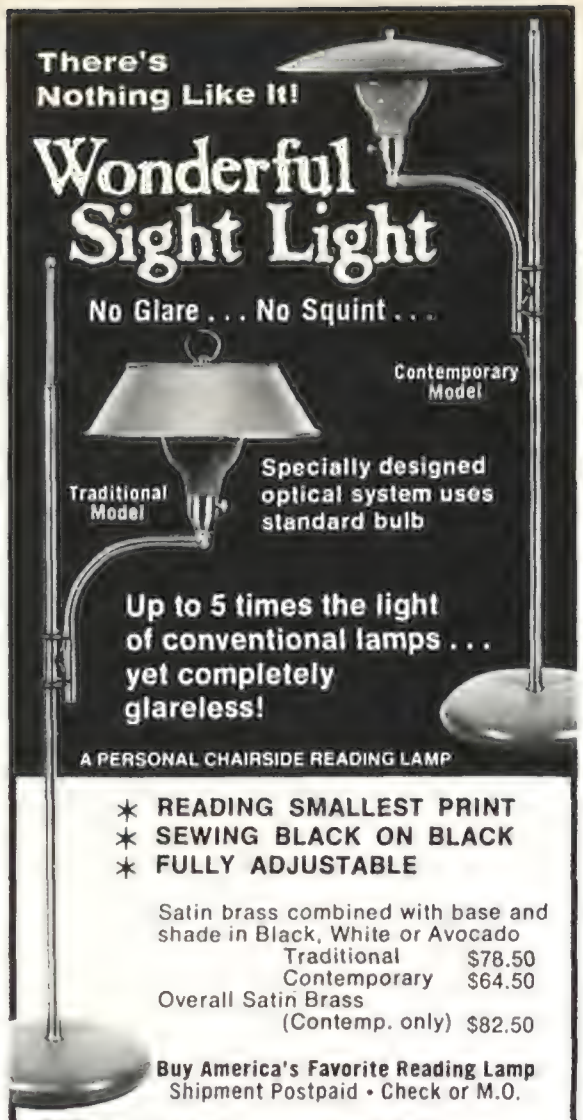
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The hazards of cycling

If the National Bureau of Standards is correct, another cause of all those fractures is that implement so admired by the environmental movement: the bicycle. In the bureau's magazine, *Dimension* (Volume 60, Number 7), Michael Baum reports that some 100 million Americans ride bikes and one result is an estimated 476,000 bike injuries in 1975, putting bicycles at the top of the Consumer Product Safety Commission's Hazard Index for products involved in accidents.

There's not much the Bureau of Standards can do about nuts on bikes who whiz through city streets blithely ignoring the traffic laws, or wobbly beginners, or for that matter antagonistic motorists who harass cyclists. And such problems, among others, account for more than 80 percent of bicycle accidents. But the bureau can encourage certain standards of bicycle manufacture.

The most common cause of bike failure is faulty seat clamps. Other common difficulties are broken chains and faulty hand brakes and "miserable" reflectors. The bureau has established standards for most of these matters, standards which the manufacturers now must meet.

So new bikes will be safer. But what about the cyclists?

It's with a heavy heart . . .

Like bird migration, the life-style of dinosaurs (from which, we are told, birds descended) continues to be a pleasant scientific thicket. It is suggested now that dinosaurs were warm-blooded. It is suggested also that sauropod dinosaurs—that is, the big ones like brontosaurus—lived mostly on land, not, as *Fantasia* had it, in the water.

It is a question that is intimately connected with blood pressure, we learn from *Nature* (Volume 262, Number 5565), in which Roger S. Seymour, a zoologist from Australia's University of Adelaide, enters the dinosaur controversy.

Only vertebrates with erect gaits are warm-blooded, so dinosaurs must have been warm-blooded goes the assertion. Probably true, says Dr. Seymour, since warm-bloodedness is also associated with the high systemic blood pressure necessary to pump blood long distances between the heart and the brain—in the case of the sauropod known as brachiosaurus

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this can be a matter of more than 15 feet.

But Dr. Seymour estimates that for a brachiosaurus' heart to achieve the kind of blood pressure to support so long a neck, the heart would have to be eight times heavier than that of a whale. And such a heart, weighing more than one-and-a-half tons, would be inefficient.

No one has ever seen a brachiosaurus heart and Dr. Seymour prefers to think that these creatures were aquatic, since water pressure would lessen the requirement for so heavy a heart. No ideologue, however, Dr. Seymour says they *might* have lived on land, but "simply might not have raised their heads high, or if they did, they endured a temporary cessation of blood flow to the brain." In other words, they fainted.

The color-blind astronomer

In the constellation Canis Major there is a bright star called Sirius. This star is plainly white, but Seneca and Ptolemy in the first and second centuries A.D. called it red, a surprising error for two such careful observers.

More recently it was discovered that a tribe in Mali, the Dogon, have a legend that Sirius occasionally appears red. More interesting to ethno-astronomers (or astrono-ethnologists, take your pick), the Dogon's legend tells of Sirius *and* a dark companion star.

The Dogon, it was recorded by French anthropologists, believed they came from a planet circling the dark companion star—a star which they described as "dense" and as circling Sirius every 49.5 years. What is so exciting about this is that astronomers now know that Sirius is a binary system: it has a companion, invisible to the naked eye, called a white dwarf—a succeeding and denser stage in stellar evolution from a red giant. The white dwarf circles Sirius every 49.5 years.

According to *New Scientist* (Volume 70, Number 1006), a Viennese astronomer recently found the white dwarf to be at such a high temperature that he speculated it could have left its phase of red giantism as recently as 2,000 years ago, explaining everything. But a Delaware astronomer, H.L. Shipman, using "revised data," says that tempting hypothesis is out. The white dwarf has been a white dwarf for at least 30 million years.

So we are left for now with a more prosaic explanation: mirages. According

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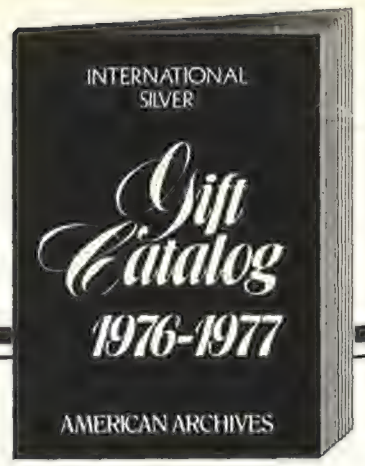

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to a British astronomer, it is possible that desert mirages could double Sirius' image and the denser atmosphere near the horizon redden it.

And a new mystery

Not long ago, two "eyes" focused on one object in the sky and found another astronomical mystery. One eye was a NASA satellite—an orbiting X-ray observatory. The other eye was an optical telescope at the McGraw-Hill Observatory at Kitt Peak, Arizona. What they saw was that a previously insignificant and mild-mannered star known as A0620-00 near the constellation of Orion had flared up. It was 300 times brighter than it had been in 1955 and it was emitting five times as much X-radiation as anything previously known in the sky.

Astronomers were mystified, according to *Technology Review* (Volume 78, Number 5). A search of old records at Harvard showed that A0620-00 had flared similarly in 1917 but no one had noticed it. It couldn't be a typical nova—a star that flares and then fades back to obscurity—because typical novas emit virtually no X-ray energy. An MIT professor, Saul A. Rappaport, suggests that it is a "recurrent nova"—a pair of stars one of which is normal and the other a highly compact nucleus, possibly a neutron star. As the dense star pulls matter from the normal star, "density and heat build up toward an explosion. Then the system cools and the process begins all over again."

The end for slugs

In the war on slugs which has concerned this column over the past few months, the ultimate solution appears to have arrived from a no-nonsense reader named Berta Torbett Hiles of Marlin, Texas. "I put on stout shoes with solid soles, forget about any squeamish aversion to the sight and feel of the pests, and search them out by hand, pick them out and drop them on the ground and step on them, firmly and with determination." Twice daily attacks, especially in the spring, will practically rid the garden of slugs. No doubt, for those who seek somewhat less direct involvement, a pair of large kitchen tweezers could be substituted for the hand-to-hand combat.

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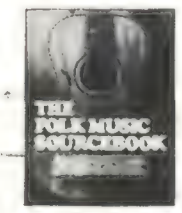

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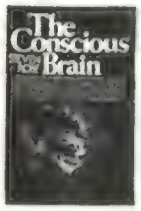

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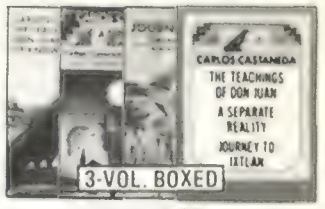

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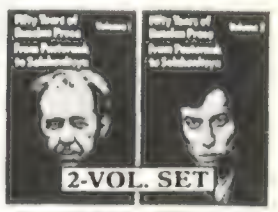

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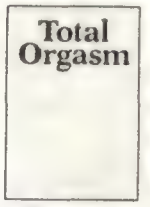

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Letters to the Editor

Whales

Dear Sir: Enjoyed is not the word—for at moments I was moved to tears by Matt Herron's article in the August issue about the Greenpeacers' stand-off with the Soviet whale killers. Rex Weyler's photographs were equally effective in bringing to attention the serious plight facing our world's whale population.

Although I live in the midst of the Rocky Mountains and may never get to see one of these gentle giants surface on the sea, I will rest more peacefully knowing that efforts are being made to ensure that whales may live to grace oceans with their strength, beauty and intelligence.

Cathleen Caballero Wild
Aspen, Colorado

Dear Sir: Your article detailing the mission of Greenpeace on behalf of whales was truly moving. On an earlier expedition, Greenpeace tried to save the harp seals from Canadian sealers. This organization is a shining light amidst the ominous shadow which human domination has cast over the natural world.

May the cry be heard 'round the world: LET THEM LIVE!

Bruce Wilkey
Signal Mountain, Tennessee

Dear Sir: I have always admired men of the sea for their courage and love of adventure. After reading about "Ahab's children," I'm convinced that there are still men who will fight with courage and dignity for what they feel is needed to right a terrible wrong.

Jan Ferraro
Weirton, West Virginia

Dear Sir: I, too, felt lonely with that dead whale child.
Mrs. Judith A. McCain
Windgap, Pennsylvania

Dear Sir: The heroic act of the bull whale made me want to scream, and I cried like a baby.
Donna M. Napoli
Chicago Heights, Illinois

Dear Sir: What a pity that whalers have lost touch with the beauty of nature's living creatures.
Brenda Malinics
Philadelphia

Dear Sir: How unbendingly callous some industries are in keeping up their quotas. It is sad, the plight of the whales. The crew of the *Cormack* is beautiful!
Win Mason
Black Forest, Colorado

Dear Sir: May the dollar sign not be the epitaph for our planet. I sometimes wonder if Homo sapiens were to become an endangered species, would "anyone else" consider us as worthy of being saved from extinction.
Beverly P. Keane
La Jolla, California

Dear Sir: Making the public aware of the barbarism and shortsightedness of whale extermination, as Matt Herron has done, is a potent contribution. Another would be the boycott of goods which might persuade whaling nations to abandon the industry and adopt the economically feasible synthetic or other natural substitutes for whale products.
Janice Sands Tesler
Los Angeles

Dear Sir: While I applaud any efforts to inhibit butchering whales, two points disturb me about Herron's article. First, while the story does evoke feelings of disgust and outrage, I fear that it probably also evokes a feeling of catharsis that a handful of whales have been saved and that this token group of individuals can shoulder the entire responsibility of defending our gentle and magnificent mammalian relatives.

Secondly, and more disturbing, was the paradoxical reference to the photographer with his "Nikons at ready." Anyone with the least devotion to the fight to stop

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the whale butchers must be aware of the move to boycott Japanese as well as Russian goods.
James F. Phillips
Boston

Dear Sir: As a teacher, I have concentrated on teaching my children about our endangered species, especially whales. Through educating children and adults about this grave injustice, we can hope to put an end to this anguish. After all, any product made from whales can be made synthetically, or is not needed.

I would like to share the following quotation with your readers:

"The sperm whale is now officially the state animal of Connecticut and, as such, 'belongs' to us, but *much more* significantly, all whales really belong to themselves and are a part of the entire natural order. Unless we are able to bring a stop to their gradual extinction (and stop the extermination of all other endangered species) we shall destroy not only a wondrous creature, but part of our own world *—forever.*" (from Dr. Robbins Barstow and Nancy Gardner of the Connecticut Cetacean Society).
Ann Marie Goddard
Bethel, Connecticut

Dear Sir: The indifferent slaughter of Pacific whales can certainly bring tears to our eyes, but the sentimental efforts to save this endangered species seem ludicrous in light of the millions of animals slaughtered annually to feed and embellish the human individual. The bloody horrors of the *Vostok* are concealed by packinghouse walls.
Robert DeLay
Knoxville, Tennessee

Dear Sir: We believe you have made an error in the transliteration of the names of the Russian vessels.
Albert J. Froelich
Huntsville, Alabama
According to the transliteration systems preferred by the Library of Congress and the British Standards Institution, the names of the Soviet ships are: Vlastinyi *and* Dal'nii Vostok. Ed.

Dear Sir: Does the Greenpeace crew plan further expeditions against the Russian and Japanese whalers?
Helena M. Burns
Belmont, Massachusetts

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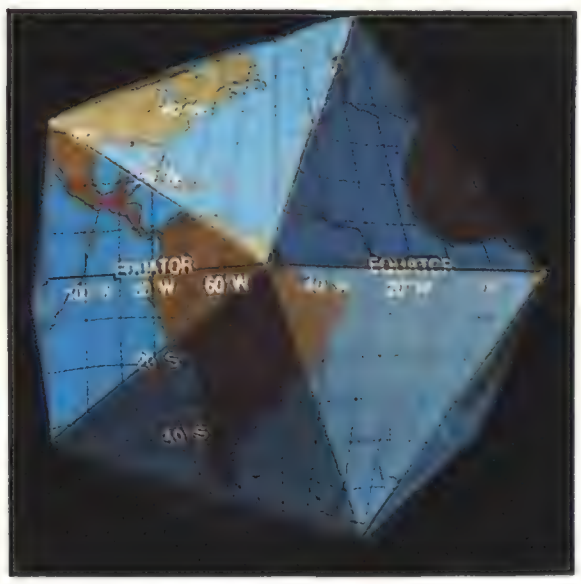
In the last few months the Greenpeacers have chased the Russian whalers again for hundreds of miles between San Francisco, Honolulu and Vancouver. In one two-day confrontation, they claim to have saved three dozen whales from the harpooners. They also feel they saved many others by giving high-speed chase to the Russian ships, which were forced to move too fast to catch whales. They have sent up planes to search for Japanese whalers but, so far, have not intercepted any. Ed.

Dear Sir: I would appreciate the address of the Greenpeace Foundation and information on whether the "LET THEM LIVE" T-shirt worn by the *Cormack*'s cook is for sale for fund-raising purposes?
Mrs. Cathleen Hering
Hillside, Illinois
For Mrs. Hering and the many others who wrote, the address is: Greenpeace Foundation, 2108 West Fourth Street, Vancouver, British Columbia. The T-shirts are for sale there. Ed.

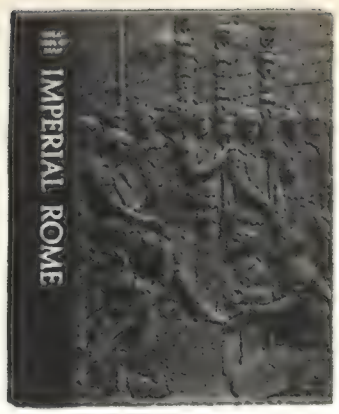
Geo-Art

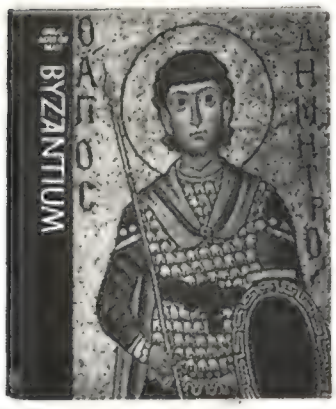
Dear Sir: Athelstan Spilhaus' article on Geo-Art fascinated me until I came to the 20 triangles of an icosahedron. I'll bet seven seas against all the continents that no one on your staff can fold these triangles into a globe [see below].
John D. Thomas
Detroit



Morgans

Dear Sir: My emotions are mixed after reading your article on Morgan horses. I wish they were the brave, unchanging all-





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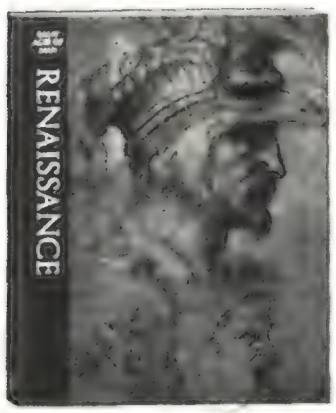

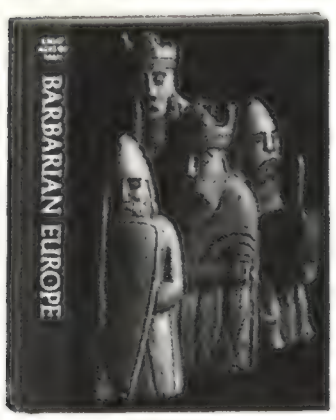

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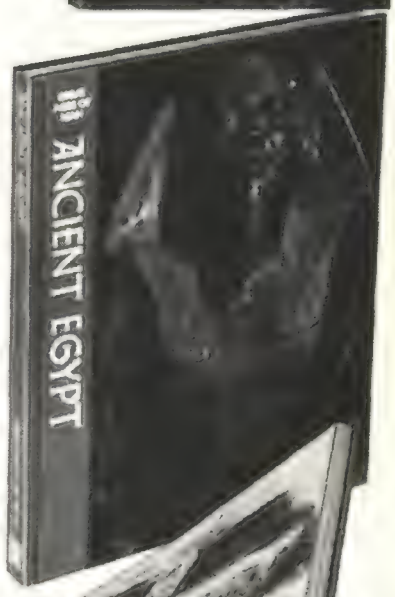

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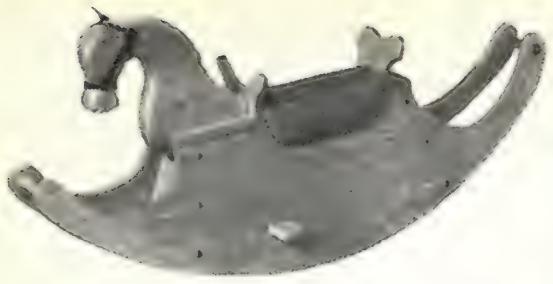

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purpose breed that Peter Chew has researched and described so well. Unfortunately, very few modern Morgans have the training, the temperament, physical structure and stamina to "live on cobs" or "go for days."

There are still breeders striving to perpetuate the sturdy, do-everything Morgan, but they are outnumbered by the people who raise Morgans specifically for showing. Readers who are drawn to Morgans by your article should look long and hard at the legs and temperaments of the Morgans they find. The all-purpose Morgan is being bred out of existence.
Nancy Latha Simerl
Greenwich, Connecticut

Dear Sir: We breeders feel the need to protect the Morgan and keep it the "brave, unchanging all-purpose breed" Peter Chew described. Today we find people referring to the "old-type Morgan" and the "new-type Morgan," to which we breeders say "there is only *one* Morgan type and that is the one that resembles the one and only Justin Morgan."
Edith M. Earehart
Northville, Michigan

Dear Sir: An important part of our Bicentennial program was the dedication of a bronze plaque in our town hall to the

Morgan horse and his West Springfield origins. Out on Morgan Road a monument marking the location of Justin Morgan's farm can be seen.
William J. Sullivan
West Springfield, Massachusetts
Mystery has surrounded the horse from foaling to grave. It has been claimed that he was thoroughbred, Arabian, Dutch, even French Canadian. Many authorities believe the horse was foaled in West Springfield, although others have speculated that he was foaled in Vermont. Ed.

Dear Sir: Stonewall Jackson's war horse, Little Sorrel, may still be seen. It is mounted in the Museum of Virginia Military Institute, Lexington, Virginia.
George Norton
Dobbs Ferry, New York

Soursop

Dear Sir: After reading James K. Page's item in "Phenomena, comment and notes" on new tropical foods, I await with great anticipation the arrival at my supermarket of the soursop he mentioned. My only encounter was at a tiny guesthouse on a Caribbean island where one of the owners handed me a delicious drink he said was made from a native fruit. I hope I do not have to wait too long for another soursop daiquiri.
Thomas L. Adkinson
Birmingham, Alabama

Book review

Dear Sir: We were very much pleased with the review of our recent title, *How Cities are Saved*, by Herbert R. Lottman. But, unfortunately, the review stated that the book was published by University Books; there is, indeed, such a company but we—Universe Books—are the publishers of Mr. Lottman's book.
Nancy Lipscomb
New York City

Essay

Dear Sir: Arthur Evenchik's "The right to dissent" is a nice reminder that some young people are capable of individual thinking and have the gift to express their thoughts. I am thankful for the Smithsonian-Wells Fargo essay contest.
Mrs. Barbara I. Nelson
Burleson, Texas

On the Mall

Dear Sir: Edwards Park's comments about the biological poetry of Dr. John M. Burns, Smithsonian lepidopterist, brought to mind a poem my father used to recite when I was a young boy. Like Burns' "To a Lonely Hermaphrodite," it has a title longer than the verse:

"The Antiquity of the Flea"
Adam had 'em

Robert M. Braude
Denver, Colorado

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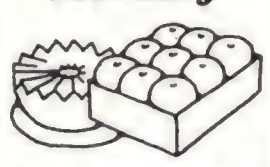

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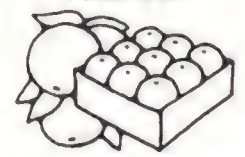

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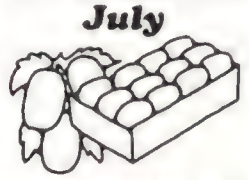

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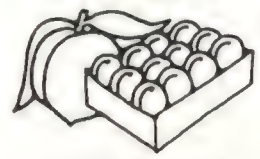

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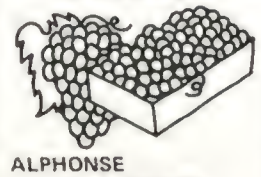

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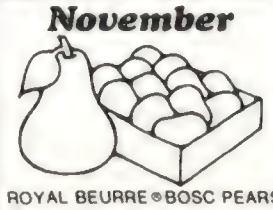

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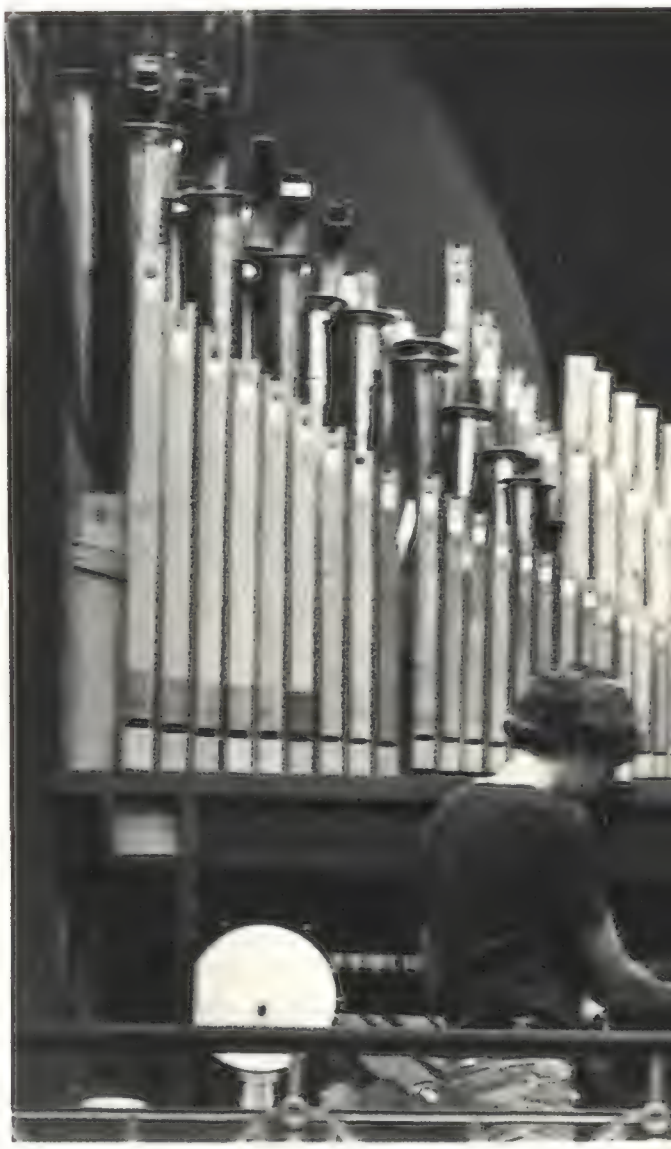
Around the Mall and beyond

Outside the Museum of Natural History the Strolling Troubadors (sic) were playing. They were lined up right beside Uncle Beasley, the Fiberglas triceratops on the Mall upon which young children climb, and they sang country songs that were almost, but not quite, Bluegrass—strumming, blowing and sawing on such instruments as flute, guitar, banjo and fiddle. The sound was lively and nice,



fitting in with the happy squeal of youngsters sliding down Uncle Beasley's primordial spine.

The performers seemed to be a long way from the Smithsonian's Folklife Festival, where music in a dozen forms has reigned all summer, and I stopped to watch. A little folder was thrust into my hands which informed me that this was one of Washington's ubiquitous summer shows, put on in the National Capital Parks by the National Endowment for the Arts and the Park Service.

I listened with pleasure, then moved on across the Mall. As I neared the Arts and Industries Building, the music of the carousel superseded the Troubadors like one high school band taking over from another. It was a jaunty little march with lots of drum and cymbal in it, and I found myself falling into step as I drew near. I noticed that others were doing the same, unconsciously picking up the rhythm until that whole edge of the Mall was parading, everyone in his own direction, yet all in step except for one outsider who dawdled painfully behind the beat. He was either deaf or an instinctive

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revolutionary, following some *very* distant drummer.

The carousel's thumps and blares faded as I reached the main entrance to "1876" in the Arts and Industries Building. I entered and was met by the rich chords of the great orchestrion up in the gallery of the rotunda, swooping and dipping through a joyous Strauss waltz.

The orchestrion fills the whole building with its music, and it made me realize that I had spent my working day pretty well swathed in music of one kind or another. I had been visiting the new Insect Zoo at the Natural History Museum; even there a loudspeaker fills the air with the songs of crickets, cicadas, locusts and other tuneful little beasties, all amplified and reminiscent of a hundred hot summer afternoons.

I had also dropped in at "A Nation of Nations" in the Museum of History and Technology, farther down the Mall, and there had been enwrapped in a whole concert of nostalgic sounds and songs. Besides the sigh of the wind on the prairie and the delighted roar of a baseball crowd as Hank Greenberg smacks a homer in the sports section, there is every tune from a 17th-century English folk song to Sir Harry Lauder singing *I Love a Lassie* and a rinky-dink piano banging out ragtime for a few feet of silent movie.

At the other end of the same building, in the section of "We the People" that deals with politicking, you can hear a steady serenade of scratchy old-fashioned phonograph songs with lines like "Hurrah for Blaine and Logan," and something about Hayes and Wheeler: "They're brave, they're honest and true!"—which, in a most satisfactory way, turns out to rhyme with "red, white and blue."

All the incidental Smithsonian music seems to come together with the sounds of the orchestrion in "1876." This great music machine plays about once an hour, going on for 15 or 20 minutes. Its performances are linked with the appearance on its gallery of a blond young man in a T-shirt who sets it going and then stands beside it, listening critically to every woof and tweet of wooden pipes, every blare of brass, beat of drum, clash of cymbal and ting of triangle.

The young man is Brian Jensen. He told me that the wonderful machine is a Welte Orchestrion, built in Freiburg, Germany. The M. Welte & Sohn plant was going strong in the latter part of the

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19th century and had a branch in this country, but war and depression closed it.

Orchestrions were popular additions to restaurants and meeting halls, but a few rich families also had one in their mansions. The Packards of automobile fame, for example, owned a Welte, not unlike ours, which is now in Vancouver. Jensen says the carousel uses a kind of orchestrion called a band organ. It's minus a good many notes, for economy's sake. "It only has three notes for the bass," Jensen says. "That's enough for the usual 'oompah.' If a tune calls for more, it simply comes in with a bang on the bass drum."

Our orchestrion has 100 keys, 53 of which produce notes, while the remainder activate drums and other effects —or arrange spaces or holds or other mechanical necessities.

An actual 1876 orchestrion would probably have played music that was arranged on a wooden cylinder with prongs and bars sticking out to trigger the keys. The bellows would have been pumped by a clockwork mechanism run by the steady pull of a weight—or perhaps by a small steam engine, huffing away.

The model in our "1876" exhibition cheats a little by being a bit more modern. It runs on electricity and it uses perforated paper music rolls—much lighter and handier than wooden drums. Jensen says we have more than 100 rolls and that the music really comes close to what you might have heard in 1876. The options that year were pretty good. Wagner was in business with the Ring of the Nibelungs, and Offenbach was actually present at the Philadelphia Centennial celebration. Americans were enthusiastically gathering around their parlor organs at that time, hitting close harmony with *Silver Threads Among the Gold* and the new hits *I'll Take You Home Again, Kathleen* and *Grandfather's Clock.*

Since 1876 was a patriotic year, nationalism was rife. This is reflected in the rolls Jensen puts into our Smithsonian machine. We hear a fine collection of Civil War tunes, including *Dixie,* which was back in good repute by 1876. There are also marches and medleys that seem to contain everything from *Yankee Doodle* to *My Country 'Tis of Thee.*

Jensen selects pretty much what he's in the mood for—maybe the overture to *The Mikado* or the *Light Cavalry Overture* or *Listen to the Mockingbird.* The great-

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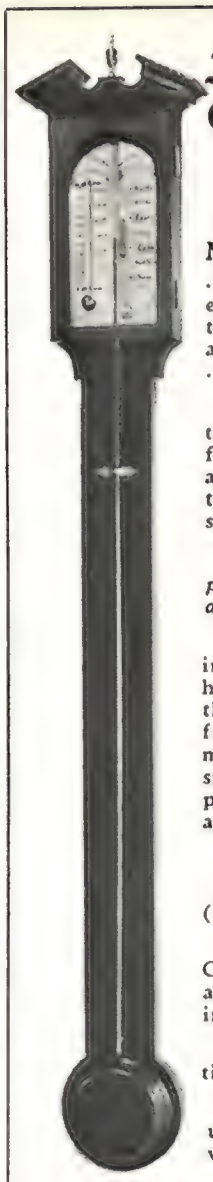

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est crowd pleaser, he says, is the Offenbach can-can music. I must admit that I, too, love that rousing chorus that never fails to evoke an imaginary line of long-legged, black-stockinged beauties, high-kicking their way through these staid Smithsonian halls, then turning their backs at the end for that delicious little flip of lacy petticoats.

Others must envision this delightful prospect, too. The visitors gather around the fountain beneath the orchestrion while Offenbach has his say. And when the last chords fade and the imaginary flip is accomplished, they often applaud. I expect that the fountain, at this time, gets a few nickels, dimes and even quarters, tossed in with the pennies. They tell me the fountain earns about $20 a week from good-luck coins. Workmen come with half-gallon ice-cream buckets and clean it out every couple of weeks or so, and I've seen those pails crammed with grungy wet money before the crowds come at 10 A.M. The fiscal harvest goes to the horticultural department to help pay for new plants and to defer insurance costs on the fountain. I have it on good authority that the august Smithsonian is guilty of "salting" the fountain—tossing back a few coins to give newcomers the right idea.

When the orchestrion stops at the end of its scheduled performances, you're apt to hear the distant tinkle of a piano. Down among the exhibits the Steinway—or sometimes the Mason-Hamlin organ—is being played by Dot Wortman or Louise Horn, two docents who are among the several in 1876 gowns, strolling these exhibits and answering questions. These two play and sing the great old songs: *Sweet Genevieve*, *Beautiful Dreamer* or anything you can think of from Stephen Foster. Even Jensen, who is having an affair with the orchestrion, admits that Foster needs that parlor music touch. "The Germans did Stephen Foster rolls for the Welte," he told me, "but they made them sound like Prussian military band music. They never could understand plantation life."

The nice thing about the Wortman-Horn concerts is that sometimes (as I once saw) a visitor stops beside the piano or organ and sings with it. Sometimes several join in. I heard one woman doing *Jeanie with the Light Brown Hair* in a trained voice that stilled all the crowd noises in the building. And another time

I noticed an old gentleman, weary from a great deal of museum viewing, who sat quietly on a bench beside the Steinway, head lowered, lost in memories, as the beloved old songs poured out around him.

A new book by a Smithsonian expert, published by Smithsonian Press, reminds us that notable things went on here even before 1876. *The Indian Legacy of Charles Bird King* by Herman J. Viola discusses an extraordinary portraitist who recorded the looks and costumes of the Indians who visited Washington in the early days of the Republic. King's paintings formed a whole gallery in the Smithsonian castle, not long after the Institution got off the ground. But in 1865 a devastating fire tore through the castle and wrecked the King exhibit.

Fortunately, the artist had made copies of his own work and these have been located. Some, in fact, are in the White House. It is around these that Viola has done his extravagantly illustrated book.

All very well and interesting and pictorial. But the part that appealed to me was the author's description of the Indian delegation that stormed into the nation's capital to meet the Great White Father and give him presents of buffalo robes and beaver hides and beads and all that. The chiefs would be given uniforms to wear, per order of the President—blue, with red trimmings and bright black boots—and they'd gather dutifully to get the President's word about how they could trust their white brothers.

Charles Bird King

One by one, the chiefs would answer, saying all the right things back to the President. And since all this took some time, the uniforms and boots got pretty uncomfortable. Viola tells us that gradually the chiefs in the rear would slip their boots off and wriggle their toes ecstatically, and then off would come uniform coats, until, by the end of the proceedings, guards and ushers would have to hustle them out of the White House while they still kept the last vestiges of Washington decorum.

This is a fine, lively book, reminding us that many of our problems are old indeed. Crime in the streets? Back in the 1820s and 1830s, the visiting Indians had to be given police protection so they could walk through Washington's streets without being mugged by white hoodlums. Vice and corruption? Well, look at all those brave words about inviolate treaties and mutual trust between the President and his red brothers.

EDWARDS PARK

I always drink Cuervo Gold. Now & then.

Try it with soda.

Cuervo Especial. Tastes somewhere between the smooth of scotch and the mellow of really good cognac.

Try it on the rocks or in a snifter.

Of course, when you raise your glass, you'll also raise a few eyebrows. But surely you've done that before.

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By Albert Rosenfeld

In only 50 years we may add centuries to our lives—if we choose to do so

A gay young blade of Georgia in the USSR friskily twirls his mustache at the age of 113. Here, as in areas of Kashmir and Ecuador, unusual numbers of people live more than 100 years.

The 'fixed' life-span of human beings is neither absolute nor immutable. It will be up to us to choose how long to live

Human beings, like every other living thing, are designed to die. Evolution demands it. If accident or disease doesn't do us in first, we begin to deteriorate until one or more of our bodily systems fail. Medical advances of the last 50 years have increased our life expectancy—made it more probable that we will live out our life-span—but they have not yet increased the life-span itself.

Now half a dozen lines of promising—and converging—research suggest that in the next century we may learn how to alter that design so that our bodies do not self-destruct. We may learn to live, if not forever, then for centuries. The implications for society, as for individuals, are staggering.

Extending the human life-span will not happen all at once, but in a succession of small steps. Anti-aging drugs (including antioxidants) are already being tested, and it seems likely that even before we learn to extend life we will learn to prolong the years of good life.

True, nature programs us to survive—but only up to a point. That point is the production of offspring, and the rearing of those progeny to the realization of their own procreative capacities. It would appear that nature has an unflattering lack of concern for our preservation as individuals, except as instruments to ensure the perpetuation of the species. Even that may be surmising too much. So many species have come and gone in the Earth's lifetime that we are well advised not to count on any guarantees, even for the human race.

The individual human life may be likened to one of NASA's planetary "fly-bys"—a comparison that has grown popular in gerontological circles. NASA has launched many space vehicles designed to fly by Venus, Mercury, Mars or Jupiter. If everything does not survive the trip in good enough condition to function properly when it arrives, then the whole effort has been wasted. So all systems are meticulously monitored all the way to the planet; the data that is sent back constitutes a treasury of new knowledge; the scientists and engineers are elated. But when the fly-by's task is done, the designers lose all further interest in the vehicle. It may go on out into space for a long time. Its instruments may even continue to function; but few give it a thought.

It is a reasonable analogy. Unlike the planetary fly-by, however, we are sentient vehicles, and *we* care about our individual fates, even if the designer no longer does. Moreover, we are intelligent, and have been accumulating sufficient knowledge about our own workings to give us hope that we can now begin to modify what was formerly irremediable.

We have had some limited success. In ancient Greece, when the average life expectancy was 22, that was enough to guarantee the propagation of the species. But we have gone on, over recent centuries, to raise this expectancy to the scriptural three score and ten. Now we know we can do even better, not only in terms of expectancy, but in extending the actual life-span. We can discover what keeps this fly-by from functioning after its official mission is complete; and we can perhaps restore those functions, or prevent their running down. If there is a self-destruct mechanism aboard—as many believe—we can find it, and abort or dismantle it.

A good place to start is with species that seem to exhibit such a self-destruct mechanism. The Pacific salmon, for example, is a powerful fish equipped to muscle its way like a decathlon champion through all obstacles. A veritable antigravity machine, it swims upstream against the rapids, jumps up and over waterfalls as it moves with undistractable compulsion to its spawning grounds. Once spawning has taken place, this magnificent embodiment of piscine strength, health and beauty—having discharged its procreative obligations—grows old with obscene suddenness. Senility sets in virtually overnight, and, within two weeks, the great fish is dead.

Beginning of the end

Some have speculated that the very coming-in-from-the-sea, the passage from salt water to fresh, somehow triggers the onset of senescence even as the salmon spends its last heroic energies running the obstacle course against gravity to its life-in-death rendezvous. Recent studies have shown that the totally preoccupied fish may quite literally starve to death, denying itself any nutritional refueling of its vanishing energies and at the same time rendering itself unable to produce the mucus that protects the gills which filter its oxygen; so it is deprived of oxygen as well as the nutrients it needs.

Rosenfeld has followed for years the accelerating pace of research on aging. His latest book, Prolongevity, *from which this is adapted, is being published this month by Alfred A. Knopf.*

The life cycle of a salmon exaggerates all of our fates. This magnificent fish reaches its peak

The change from salt water to fresh *could* be important in some varieties of salmon, inasmuch as such changes in environment do often trigger changes in biological activity, as Dr. Stewart Wolf, director of the Marine Biomedical Institute at the University of Texas Medical Branch at Galveston, points out. As one example, Wolf cites the case of a shark whose liver, under normal circumstances, resembles that of an alcoholic human's, yellow and full of fat. It manufactures only a trace of protein, causing a high concentration of urea in the bloodstream, which would represent advanced kidney failure in a human body. If that shark is moved from its customary saltwater habitat and put into fresh water, the urea levels quickly fall.

Nevertheless, O. H. Robertson, the British-born scientist who created the first blood bank, dismissed the likelihood that the mere change from salt water to fresh could wholly account for the multitudinous, simultaneous biological transformations which he observed taking place. He dismissed the idea because he found a breed of salmon called the kokanee—a dwarf blueback variety—that lived in landlocked lakes. They spent their lives in fresh water and never got out to sea at all, yet they underwent the same rapid degeneration after spawning as the migratory varieties. For this very reason, the kokanee proved to be Robertson's favorite experimental animal; it was easier to keep track of throughout its life cycle.

Robertson found that, in a process that probably began even before spawning, the salmon's pituitary enlarged, stimulating the adrenal cortex to grow many times its normal size—resulting in an enormous overproduction of steroid hormones. As others have noted, this strongly resembles what happens in Cushing's syndrome in human patients, where a great overbalance of glucocorticoids causes widespread and often severe symptoms, including fatigue, impotence, susceptibility to infection, and abnormal accumulation of fat. This violent hormonal disturbance could certainly account for many of the senescent changes that ensue at such an accelerated pace in the salmon.

What happens in Cushing's syndrome and in the senescent Pacific salmon is similar to what may happen in individual human cells. According to the controversial theory of W. Donner Denckla, this is what happens. As the organism ages, and the pituitary releases its "death hormones," the cell is prevented from taking up thyroxine for its vital metabolic needs. Though the glucocorticoids within the cell do not increase in quantity, they are in sudden oversupply when the thyroid hormone is not there to counterbalance their effects. As a consequence, the cell is afflicted with a kind of Cushing's syndrome in miniature, which could result in the disturbance of tissue-renewal processes.

as it literally climbs uphill, but then it starts to deteriorate and die with shocking suddenness.

This would occur throughout the body, though the deterioration, subtle at the start (in puberty) and growing more pronounced only with further releases of the "death" hormone later in life, would proceed at a statelier pace than in the salmon.

Other findings have already shed a great deal of new light on the tragically accelerated events that highlight the last days of the salmon—findings that should lead to many human applications. For instance, Don Puppione of the Donner Laboratory of Medical Physics in Berkeley was astounded to discover that, just before spawning, the salmon's bloodstream contained 20 times the amount of fatty compounds—including cholesterol—found in normal human blood. Yet none of it seems to accumulate in the arteries!

In the salmon we seem to have occurring simultaneously the two diseases—both of them endocrine disorders—that most mimic aging in human patients: hypothyroidism (too little thyroid hormone) and hyperadrenocorticism (too much of the adrenal hormones, as in Cushing's syndrome). And they are without much doubt genetically programmed.

It was Eberhard G. Trams of the National Institute of Neurological Diseases and Stroke who especially concentrated on the brain and hormonal aspects of the salmon's senescence (and has continued to do so). He noted, as Robertson did but in more precise detail, the enlarged pituitary (three times as big in fresh water as in the ocean), the steroid overproduction, and other physiological changes. He also observed that the salmon died of "a complete metabolic shutdown," and that the increased production of adrenal steroid hormones seemed to inhibit antibodies, thereby leaving the fish more vulnerable to infection.

On the whole, the recent findings substantiate Robertson's in terms of hormonal causation, but it is now clearer that the process is already taking place during the entire time the salmon is journeying upriver. It could be that whatever impels the fish to undertake its amazing trip is the same trigger that sets in motion the decay processes—the compulsive behavior leading to the starvation leading to the glandular malfunctions in falling domino fashion.

But perhaps not. Hear, for instance, one more fish story—the steelhead trout's. The steelhead trout, like the salmon, comes in from the ocean and swims upriver to its spawning grounds, and also undergoes rapid degeneration. But Robert Van Citters of the University of Washington in Seattle discovered, some years ago, that the steelhead trout do not all die. Moreover, those that do survive and reach the ocean once more are somehow regenerated and rejuvenated! Terrible—presumably lethal—arterial damage simply disappears. Using radioactive tracers, Van Citters ascertained that some of the trout were able to spawn, degenerate and regenerate at least two or three times, apparently with no permanent damage. Rediscovering Van Citters' neglected work, Stewart Wolf is eager to do follow-up studies of the mechanisms that permit the trout's remarkable recovery. Can the trout teach us something about reversing human degenerative processes? Wolf is seeking support for the building of an artificial trout stream at or near UTMB's Galveston campus in order to pursue these investigations.

Unnatural aging in humans

If the Pacific salmon and the steelhead trout represent nature's experiments—perhaps inadvertent—in accelerated aging processes, there is a fortunately rare human disease which serves as a similar gerontological model for similar reasons. The disease is progeria, which the *Journal of the American Medical Associa-*

Illustrations by Kinuko Y. Craft

tion once headlined as "Nature's Experiment in Unnatural Aging." According to Franklin L. DeBusk of the University of Florida College of Medicine, who undertook an exhaustive survey of the literature, progeria occurs no oftener than once in eight million births in the United States, and he was able to find reports of only 60 cases of progeria, worldwide, as of April 1972.

There cannot be too many childhood diseases that are more tragic. Progeria victims often appear, for a period of anywhere from three months to three years, to be perfectly normal in every respect—just as height and weight may be normal at birth. But then disquieting signs begin to appear. Growth is retarded, and the progeric child, if he survives through his teens, never gets to be any bigger than a normal three-to-five-year-old. As soon as his telescoped childhood is over, other changes begin to take place. These have been described in several papers in the *Journal of the American Geriatrics Society* by William Reichel, chairman of the Department of Family Practice Program at the Franklin Square Hospital in Baltimore, who has made the study of progeria his lifelong avocation.

Life-span of 12 to 18 years

The typical progeric child begins to look frail and old as early as the age of three or four. He may start experiencing cardiac troubles as early as five, though often not until 10 or 15, and these troubles may include heart murmurs, atherosclerosis, elevated cholesterol levels, high blood pressure, angina pectoris, congestive heart failure—and finally the heart attack that is the most usual cause of death. The average life span of progerics is 12 to 18 years, though some have died as early as five (DeBusk reports those who died between five and seven were the victims of accidents, and that seven is the earliest death from "old age"), and some have survived to the age of 27. For the most part, though, it is an early teen-age death, after a long period of steady and irreversible debilitation and deterioration. The progeric is a dwarf, but with a head that is of normal size and therefore looks larger than normal compared to the stunted body. The skin is wrinkled and parchmentlike, also almost opaque, with virtually no fat under the skin and the blood vessels showing prominently. The hair is white and sparse—if any remains at all. The face is birdlike, the eyes protuberant, the nose hooked. In fact, progeria patients, as DeBusk points out, "bear an uncanny resemblance to one another." They are weak-limbed and stiff-jointed, and no medication or therapy has yet been found that will help them.

What perhaps renders their plight even more tragic, Reichel suggests, is the fact that they retain normal intelligence, hence are sensitive to the implications of their condition. "These children," DeBusk observes, "tended to be shy and aware of their unusual appearance. They were friendly, lively, witty and mischievous in the company of acquaintances, and they exhibited normal emotions, becoming happy, angry, and sad in the appropriate situation." Harvard's Dorothy B.

We are all creatures of our DNA, the helical molecules that dictate our form and function. It

is almost as though we live long enough to insure the survival of our DNA, then are switched off and left to die. If we can find out how DNA does it, we may be able to turn the tables.

Villee adds, in *Pediatrics*, that "Their major complaint is the social problems produced by the stigma of their appearance."

Though progeria undoubtedly mimics old age, its victims do not show all the signs of senescence (senile dementia is absent, for example), hence there are reservations about looking upon what happens as true aging. The similarities in symptoms could turn out to be nothing but coincidence. Reichel asks: "Is it truly a disease of accelerated aging? Does it in fact represent a genetic error? If so, is there one genetic mechanism regulating man's normal life-span? Or conversely: Is there a gene or group of genes whose purpose is to facilitate the incorporation of errors into a biological

system? If so, does progeria represent an early activation of such a mechanism?" The questions must remain, for the moment, rhetorical.

Progeric children do not seem to have any gross chromosomal abnormalities. Though various studies have cast suspicion on the hormonal and immunological abnormalities of some progerics, the findings have not been consistent, and there exists no conclusive evidence that it is basically either a hormonal or an immunological disease. Reichel has found large accumulations of lipofuscin—the "aging pigment"—in the cells of progerics, as well as abnormalities in the connective tissue. Betty Shannon Danes of the New York Hospital-Cornell Medical Center has also reported that progeric cells have a lowered cloning efficiency, as well as a diminished capacity to duplicate their DNA or to divide normally (all those deficiencies logically go together, of course). And a Harvard team has turned up suggestive evidence of faulty DNA-repair mechanisms in progeric cells.

No one group of people seems to be singled out as progeria victims. The cases are spread over many nations, and the disease seems to afflict all races, males as readily as females. There are only three reports of more than one victim in a single family, and only one case that might have resulted from a consanguinous marriage. Thus, though progeria is suspected of being a genetic disease, much about it remains puzzling, and it has certainly not yet been proved to be hereditary.

There is a similar disease, however, which is known to be genetic—Werner's syndrome. Its onset does not occur until somewhere between 15 and 20 years of age, when most progeria victims are already dead. Some believe Werner's syndrome may be merely a later expression of progeria.

The Werner's victim also suffers from arrested growth, though of course not to the same extent as progerics. They are simply much shorter than average in stature, and they too become prematurely gray and bald. (Some of their otherwise normal relatives also turn prematurely gray.) They are prone to the earlier-than-usual arrival of diseases ordinarily associated with aging, such as diabetes melitus, atherosclerosis, heart disease, and cancer. They die of what looks like old age in their forties and fifties. Though Werner's syndrome is also rare, it occurs about twice as frequently as progeria.

What are we to glean from diseases such as these?

For one thing, whether we define them as "true" aging or not, there is no doubt that, in both diseases, widespread degenerative changes do take place at the level of both the individual cell and the total organism. Whatever it is that occurs brings on degenerative changes much sooner than would happen in the normal course of events, suggesting strongly that the occurrences are not due to simple wear and tear. The probability appears high that some internal timing mechanism is at work, whether it is identical to the clock of aging or not, and that it affects the entire organism; and, further, that the mechanism is somehow built into the individual's genetic information—perhaps as something added, perhaps as something missing, but in any event as something gone wrong. And the something wrong would seem to be in whatever mechanism regulates the onset and rate of deterioration. The defect could be in the molecular-genetic apparatus of the individual cell, passed on to all the body's cells by the original fertilized egg. Or it could be in the hypothalamic-pituitary controls of the endocrine system which affect all cells.

In progeria, it is quite clear very early in life that something has gone radically wrong with the child's development. In Werner's syndrome, it is equally clear that the something wrong has been postponed (if you compare it with progeria) *on program*. There are other devastating diseases, such as Huntington's chorea, which are genetically triggered late in life; but in the case of Werner's, what is triggered is a whole cascade of degenerative agelike changes. If these can be triggered genetically in Werner's victims, they can be triggered in "normal" individuals at more advanced ages—giving added credence to all genetic-clock theories of aging. The hope in these diseases, as in true aging (which is also, in that case, a genetic disease), is that if a program can be accelerated by accident, it can be slowed down—or reversed—on purpose.

After caging death, Science can learn to step off toward the Brave New World of almost limitless life. But will Man be bored with a life of, say, even 500 years?

The several moods of Preston Jones emerge
as he reflects about life in small-town America.

By Tom Prideaux

The classic family drama is revived in 'A Texas Trilogy'

Citizens of Bradleyville erupt from Preston Jones' storehouse of Southwest memories to bring a powerful new theater to America

Preston Jones has given the State of Texas its liveliest literary export in years. With almost no experience as a playwright, Jones put pencil to pad—he prints his words, letter by letter—and wrote three full-length plays under the label *A Texas Trilogy*. All three of them are winners. It is easier to imagine a man who never heard of baseball picking up a bat and hitting three home runs in his first game.

Jones wrote his plays for the Dallas Theater Center under its astute managing director, Paul Baker. Last summer a new production of the trilogy had a record-breaking run at Kennedy Center in Washington, D.C. (part of the Smithsonian Institution, although administered separately), and has just opened on Broadway. The rest of the country will no doubt be seeing it later, although one play has already been done in 30 cities.

Jones, it is said, fits the new mood of our time. He has been praised for not writing the old Broadway stuff about neurotic misfits, though by his own account there are as many alienated souls among the tumbleweeds as anywhere else. But the welcome change that Jones really does provide is a change of countryside, a change of talk—his Texas lingo cracks like a whip—and a change of ambition: oh, to live in a trailer park! Jones' trilogy also feeds our hunger today for narrative that will stick to our bones, for lots of characters to blame or love. And he satisfies our yearning to belong to a tight community, like the teeming households we admire in the TV series, exchanging our own failing families for the fictional varieties.

But while I grant his sociological relevance and his gifts as a playwright—comparisons have been made to Arthur Miller and Tennessee Williams—what I like best about Preston Jones is the way he calls on his memories of the Southwest and comes up with something fresh and funny, and very touching, a lasting piece of Americana, valuable simply in its own right.

I saw what memories could mean to Jones when we walked back to his hotel after a Washington matinee. Without any warning, he shouted, "Beverly Orr!"

I looked around, expecting to see Beverly. The sidewalk was empty. But another look at Jones assured me that he was seeing her plain as day.

"Beverly Orr!" he went on, turning to me. "I met her at the theater today. Hadn't seen her for 20 years. Had no idea she was in Washington. Skinny little girl then. Beautiful eyes."

"Was she a childhood sweetheart?" I asked.

Actor turned author, Jones likes to talk over new scenes with players—here, *Graduate*'s Pat Roe.

Photographs by Yoichi R. Okamoto

"Ah am the Imperial Wizzard" "Ah am the Golden . . ." "Ah am Wisdom" "Ah am the West Wind" ". . . Fountain of Truth"

"Oh, no, nothing like that. She was our high school Homecoming Queen."

Jones was silent for a moment as, in his memory, he hurried back to high school. Then he joined me again. "Dear God, seeing her today! I grabbed ahold of her. I felt terrific. I could have broken down and cried." At 40, Preston Jones is tall, sturdy, weathered, with a lantern jaw and unusually bright and defiant eyes. But I could see how easily he might cry. He was hearing the rush of time, and "Time is the thing," he told me, "that tears me up."

Theater and art critic Tom Prideaux has written articles on Ellen Terry in America and Whistler's Peacock Room for SMITHSONIAN.

The image of Beverly got him started. Over a beer in the hotel we talked about his youth. He recalled working on a survey team for the highway department in West Texas. He told me the names of his cronies, a roll call of his memories. "Homer Lucas, Kent Womack, Floyd Rickey." Then there was his college friend, Rick Wilson. One summer they played semipro baseball for $250 a week. He remembered Dan Kinslow, a high school friend whose mother Rosetta was a dancing teacher. She once said to Jones, "You're crazy. You've got a great artist's mind. Drop everything else and get into the arts."

Jones switched from preforestry to the Speech Department at the University of New Mexico, and later he took his master's degree in drama, working un-

"Ah am the Sun" "Ah am the Moon"

Knights' ridiculous initiation for first new member in five years (left) is disrupted as Colonel preempts a speech. Afterward, black custodian at supposedly secret ritual intones a mocking reprise: "Ah am de moon. Oh lawdy. Ah am de moon."

der Professor Paul Baker at the Dallas Theater Center.

Jones is married to one of Paul Baker's top assistants, the former Mary Sue Fridge. He has made Dallas his home for 15 years, acting, directing, working backstage and in the box office. When Baker put him in charge of finding new plays for the small experimental theater, Jones was dismayed by the scarcity of good plays about the Southwest, so he wrote one.

His first try, *The Last Meeting of the Knights of the White Magnolia,* was produced in 1974 at the Center's biennial Play Market. Directors and producers came from all over, prospecting for theatrical gold.

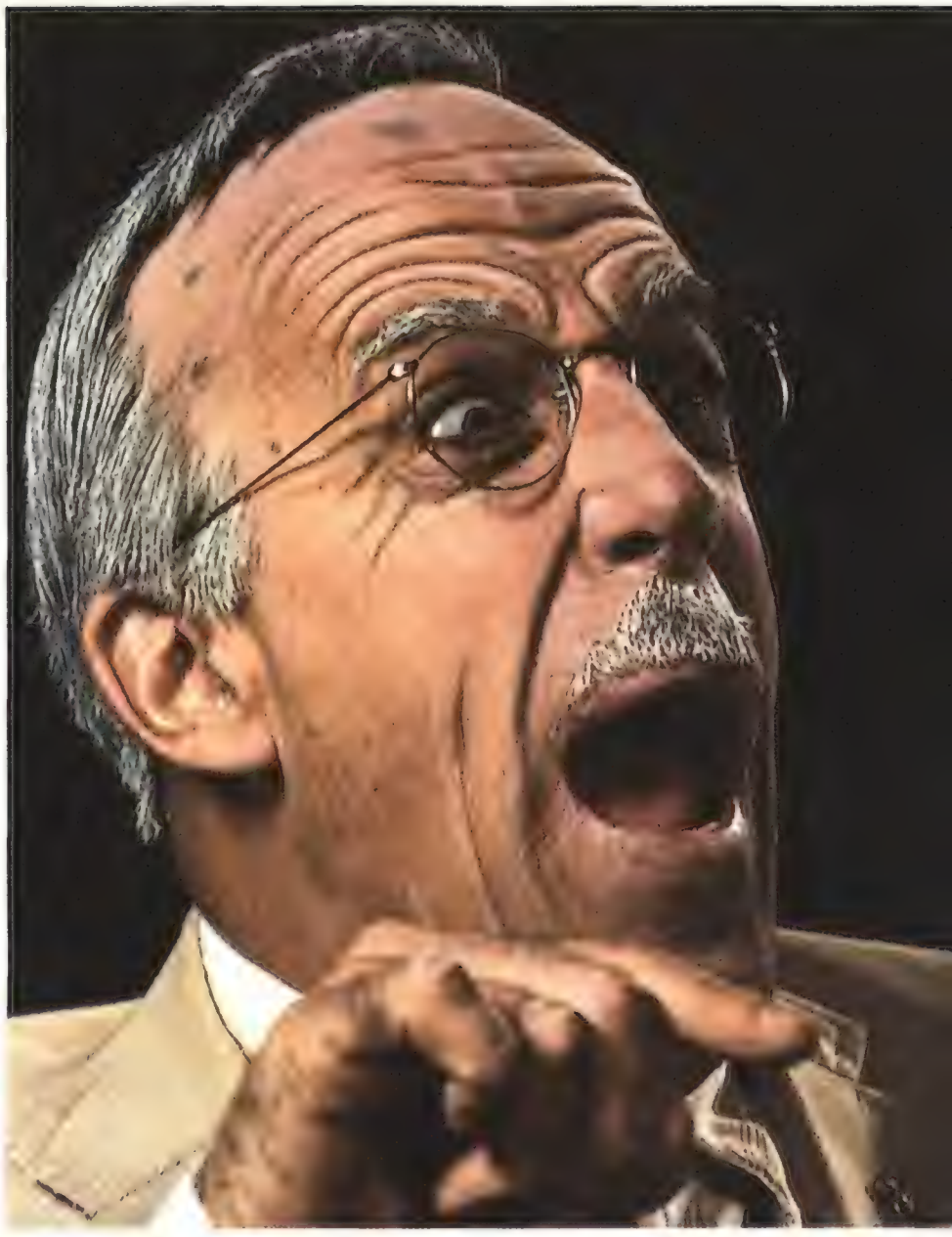
As a setting for his play, Jones invented Bradleyville, a sort of composite West Texas town of 6,000 that had been bypassed by railroads and superhighways, and was sifting away in dust and disappointment. His "knights" were lodge brothers—a cotton farmer, a refinery worker, a saloon owner and the like—who meet upstairs in an old hotel, and try to revive their lost glory by putting on faded robes and turbans, and initiating a new member—a very rare event. "You are now on a journey . . . to seek the Golden Fountain of Truth. . . ."

Jones in this work was not riding the Ku Klux Klan, although he had one of his characters say, alluding to the Klan, ". . . Anybody that's got to put on a white bedsheet to kick a coon's ass has got to be a damn fool . . . !" Jones' intention, with his Knights, was to both kid and sympathize with the human need for rituals and clubby huddling.

Two notable visitors to Dallas admired Jones' first play, the *Knights.* One was Broadway director Alan Schneider. He recommended it strongly to Zelda Fichandler, who runs the Arena Stage in Washington, D.C., with the result that it was given there in 1975 under Schneider's direction. It was also done across the nation in 28 different productions by other members of the American Playwrights Theater from Atlanta to Anchorage. The second visitor was a New York agent, Audrey Wood, a tiny dynamo of a woman who signed up Jones as one of her authors. Later, when she took Jones' hand to pilot him across New York's risky streets, she looked like Thumbelina pulling a giant.

Meanwhile, Bradleyville was becoming permanently, demandingly real to Jones. Odds and ends of characters that existed in his memory bank were crowding into the town, settling down, clamoring to be brought to life. He had no choice but to write more about Bradleyville, and thus he created his trilogy. Some characters barged from play to play, or were mentioned as if they were just across the street. This made the whole town seem alive and kicking, and gave the trilogy an added vitality as it went on.

The next chain of events represents a healthy trend in American theater. After the trilogy had its Dallas debut in 1974, Audrey Wood began arranging a major Washington-New York engagement, sponsored by producers Robert Whitehead and Roger Stevens, with Schneider as director. It would have to be an ambitious venture—about $350,000—with four settings, stage crew and large cast. Stevens booked it into Kennedy Center, of which he is board chairman. Every effort was made to create the best possible production.



In his dotage but still feisty, Colonel dismisses concerned hotel custodian with wave of denture.

All this depended on the interplay of many groups. At the outset, Paul Baker and his Dallas theater were invaluable. Regional theaters provided a boost. Then the wolves of the commercial theater pitched in. Together, they gave the playwright time to experiment, think, grow and, finally, show off his work.

In Jones' trilogy, *Lu Ann Hampton Laverty Oberlander* covers three stages in a woman's life. At 17, Lu Ann sparkles in her shabby little home, squealing with admiration because the boys on the basketball team have dyed their hair green—just to surprise the girls. Picnics, drive-in movies, joyrides in a Hudson Hornet occupy Lu Ann until her brother introduces his oafish buddy from the Korean War, and she goes dancing off to her first dreary marriage.

Ten years later Lu Ann has been divorced. She works in a Bradleyville beauty parlor, supporting her daughter, living with her mother, and finding the right man to marry when she stops for a beer at Red Grover's bar. Her first skirmish with Corky Oberlander, a road inspector out of Jones' memories, is a love duet beauti-

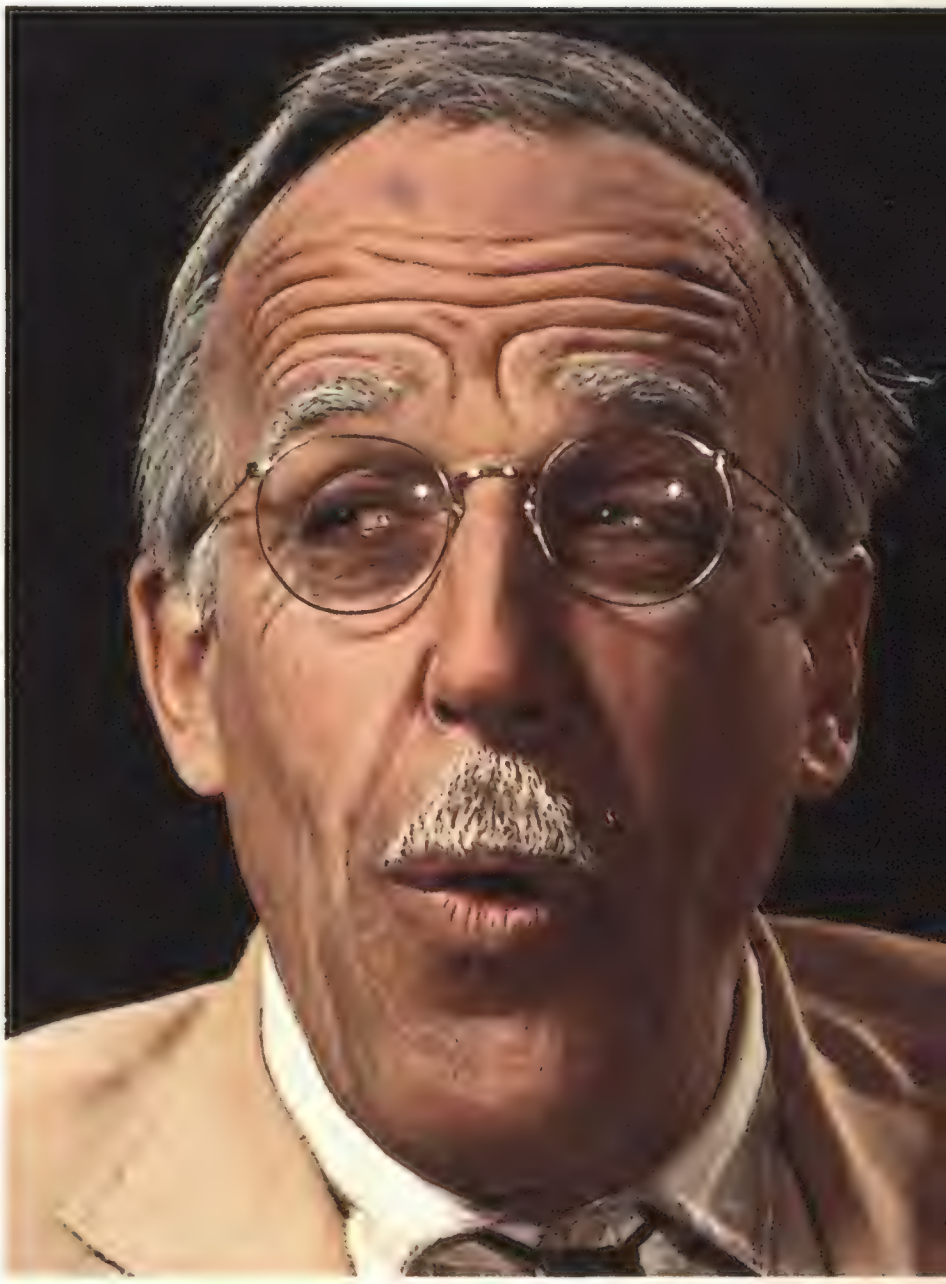
fully orchestrated with snarls and spats. It's the kind of thing that Jones does expertly, a mixing of sweet and sour, with the sweet taste left to linger on.

In another ten years, Lu Ann, at 37, is a widow, her brother an alcoholic, her mother a helpless paralytic, barely conscious. But Lu Ann refuses to put her in a nursing home, knowing that what the old lady needs,

even more than to be fed and cleaned, is to be loved. The play is an account book of diminishing returns, which by rights should be depressing. But it isn't, thanks both to Jones' bracing humor and compassion, and to Diane Ladd's marvelous portrayal of Lu Ann. As Lu Ann grows salty and hard, she also grows noble, but without a trace of self-pity.

The Knights of the White Magnolia also benefits from a superb performance by Fred Gwynne as batty old Colonel Kincaid. Shell-shocked in World War I, he slams around the lodge meeting in his wheelchair, barking military commands and guffawing wildly at himself with his jaws wide open yet producing no sound except a faint wheeze like escaping gas. He usually forgets what he starts to say, but doesn't care, as if memory and amnesia were twin facts of life to be indulged equally, without shame. Kincaid has the earthy extravagance of a Mark Twain character. It amuses him to recall that once at a grand lodge meeting in Tulsa, Oklahoma, he "got drunk and threw up all over my wheelchair. Made the wheels sticky." Again he enjoys his own silent guffaw at the outrageous behavior of human plumbing.

The Colonel rolls again into *The Oldest Living Graduate,* playing the title part. We meet him at home, living with his son Floyd and his wife, who represent Bradleyville's country club set. Floyd has a plan to make money on some lakeside property that his father owns by breaking it up into saleable two-acre plots. The Colonel refuses fiercely. He wants to



Bellowing, reminiscing and dreaming his way through *Knights* and *Graduate*, crusty old Colonel Kincaid, sensitively played by Fred Gwynne, is trilogy's strongest and most lovable character.

keep the land unspoiled as a memento of an early love, a sweetheart who used to live there with her family. "That's important to an old fella like me," he says, "havin' places that stay the same for rememberin' on." As the old man's romantic fancy collides with reality, Jones' play recalls a similar collision in Chekhov's *The Cherry Orchard,* when a family estate is sliced up to raise cash. Jones and Chekhov are not birds of a feather, but they have perceptions in common.

In Jones' play a scheme is hatched to honor the Colonel at a big public blowout as the oldest graduate of a Texas military school. But to the old man this is hogwash. ". . . Ain't no honor to be the oldest livin' *anything*. . . ." The Colonel, for all his lunacies, emerges in the end as a figure of wisdom, just as the court fools did in Shakespeare's plays.

When Jones is fitted into American stage history, it will be noted that he revived family drama during a period when it had almost disappeared. Several decades ago Broadway's greatest commercial hits, such as *Abie's Irish Rose* and *Life With Father,* were family comedies. And Eugene O'Neill's drama, *A Long Day's Journey into Night,* probably the finest of all American plays, was a family tragedy.

Then, as family life began to dwindle in reality, it dwindled on the stage. Its decline was noted, ironically, in Edward Albee's *Who's Afraid of Virginia Woolf?,* with its married couple fighting over their nonexistent child, and again in Albee's *The American Dream,* when a grandmother is treated, with bitter satire, as a piece of junk that must be carted off in a van. The only American writers today who are producing a body of realistic family drama are the blacks (in such plays as *Raisin in the Sun, The River Niger, Eden*), for their close family conflicts and social tensions continue to be the stuff of good theater.

Whatever signs and labels are pasted on Preston Jones, he must be called, in every sense, a popular playwright. He has the good judgment to resort to hokum when it is in order. He has a predilection for caricature, but so did the artist Daumier—in the interest of truth. Jones, it must be conceded, is something of a closet evangelist. While he is stirring up a ruckus —say, with his foolish Knights—he is also sermonizing for compassion. He never hides the painful facts about the human condition but he manages, in the words of Robert Frost, to "augment [our] belief in life." Two of Jones' specialties are Texas and forgiveness. Forgive and forget? God forbid. Forgive and remember.

Prankish, green-haired high school boyfriend returns as a pious preacher to reminisce with Lu Ann.

Lu Ann's personal trilogy, from an exuberant cheerleader to seductive divorcée to tough, resilient widow is evolved subtly by Diane Ladd.

Lu
Ann

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A great painter, a royal naturalist on wild Missouri

Plains Indian life, customs and combat as recorded in the 19th century by Prince Maximilian and Karl Bodmer

At Fort Clark, Maximilian and Bodmer (right) are welcomed by Mandans and Minnetarees.

Among the trappers, boatmen and frontiersmen boarding the steamship *Yellowstone* in St. Louis on April 10, 1833, none stood out so exotically as a middle-aged minor German prince and his companions, a young Swiss artist and a family retainer who acted as general factotum. The ship belonged to John Jacob Astor's American Fur Company and it was to visit the company's posts along the reaches of the wild and sometimes wide Missouri, carrying provisions and a year's supply of trade goods for bartering with Indians.

The aristocrat, Alexander Philip Maximilian, 50, Prince of Wied-Neuwied, was traveling with Karl Bodmer, 24, an artist of outstanding vitality and talent, and David Dreidoppel, his man of all work, a real-life, earlier version of Jules Verne's Passepartout. They were to be gone for more than a year.

Maximilian, scientist as well as nobleman, a naturalist, ethnologist and explorer who had established his reputation with the publication of a book on his Brazilian expedition of 1815-17, was setting forth on part of the trail pioneered by Lewis and Clark a quarter of a century earlier, to study the Plains Indians of the American West.

His book on his American experience, published in 1843, was to become a standard reference work for scholars, an important and unusually readable contribution to aboriginal science. Bodmer's extraordinary paintings appeared in the book's various editions as copperplate engravings, hand-tinted in special editions. Together, the text and engravings constitute a record of early trans-Mississippi exploration that is generally considered to be second in importance only to the journals of Lewis and Clark. The Bodmer watercolors themselves, hidden away on the Wied estate in Germany, dropped out of sight until they were brought to the United States in 1953 for a traveling exhibition under the auspices of the Smithsonian.

Adapted from *People of the First Man*, © by Davis Thomas and Karin Ronnefeldt, editors. Watercolors © by the Northern Natural Gas Company of Omaha

Now, Davis Thomas and Karin Ronnefeldt have taken sections of Maximilian's book, added extensively to them from his unpublished handwritten field journal of 500,000 words, and had made new reproductions from Bodmer's original watercolors, together presented in a sumptuous volume, *People of the First Man: Life Among the Plains Indians in Their Final Days of Glory*, to be published this month by E.P. Dutton & Co. Following are excerpts and illustrations from the book.

By Alexander Philip Maximilian, Prince of Wied-Neuwied

St. Louis to Fort Union
April 24, 1833

We saw the chain of the Blacksnake Hills, but we met with so many obstacles in the river that we did not reach them till towards the evening. Near to the steep bank a trading house had been built, which was occupied by a man named Roubedoux, an agent of the Fur

Mato-Topé (the four bears), second chief and a hero of the Mandan nation, he provided Bodmer with a noble subject and Maximilian with tales and details.

Company. [Joseph Robidoux's post is now the site of the city of St. Joseph.] When the steam-boat lay to, between 500 or 600 paces from the trading house, some of the *engagés* [virtually indentured employees] of the company came on board, and reported that the Iowa Indians, whose village was about five or six miles distant, had made an incursion into the neighbouring territory of the Omahas, and killed six of these Indians, and brought in a woman and child as prisoners, whom they offered for sale. Major Dougherty, to whose agency the Iowas belong, landed to rescue the prisoners, but they returned at eleven o'clock at night, without having accomplished their object, because the Iowas, fearing his reproaches, had completely intoxicated both themselves and their prisoners.

May 25, 1833

On a point of land, at the left hand, round which the Missouri turns to the west, we saw the buildings of Sioux Agency; the *Yellowstone* saluted the post with several guns, and was welcomed to the fort by the hoisting of a flag, while the whole population, about fifty in number, chiefly consisting of Sioux Indians, were assembled on the beach.

The Dakotas, as they call themselves, or the Sioux of the French, are still one of the most numerous Indian tribes in North America. They are divided into branches which speak the same language, with some deviations. Three principal branches live on the Missouri, *viz.*, the Yankton, the Tetons, and the Yanktonans.

The Yanktons live in Sioux Agency, or the furthest down the Missouri, among which tribe we now were. All these Dakotas of the Missouri, as well as most of those of the Mississippi, are only hunters, and, in their excursions, always live in portable leather tents. All these Indians have great numbers of horses and dogs, the latter of which often serve them as food. The Dakotas on the Missouri were formerly dangerous enemies to the Whites, whereas now, with the exception of the Yanktonans, they bear a very good character, and constantly keep peace with the Whites. Such of these Indians as reside near the Whites, are frequently connected with them by marriages, and depend on them for support. They then become negligent hunters, indolent, and, consequently, poor.

May 30, 1833

Before six, in the evening, we reached the mouth of the Teton River which the Sioux call the Bad River. The steamer had proceeded a little further, when we came in sight of [Fort Pierre], to the great joy of all.

The Sioux, who live on Teton River, near Fort

Fort Clark from the east bank of the Missouri. The Indians used the iced river as a thoroughfare to reach firewood groves and winter village downstream.

Pierre, are mostly of the branch of the Tetons; though there are some Yanktons here. Like all the North American Indians, they highly prize personal bravery, and, therefore, constantly wear the marks of distinction which they have received for their exploits; among these are, especially, tufts of human hair attached to their arms and legs, and feathers on their heads. He who, in the sight of the adversaries, touches a slain or a living enemy, places a feather horizontally in his hair for this exploit. They look upon this as a very distinguished act, for many are often killed in the attempt, before the object is attained. He who kills an enemy by a blow with his fist, sticks a feather upright in his hair. If the enemy is killed with a musket, a small piece of wood is put in the hair, which is intended to represent a ramrod.

June 18, 1833

At half-past seven we passed a roundish island covered with willows, and reached then the wood on the western bank, in which the winter dwellings of part of the Mandan Indians are situated.

Above 600 Indians were waiting for us. Close to the beach, the chiefs and most distinguished warriors of the Mandan nation stood in front of the assembly of red men, among whom the most eminent were Charata-Numakschi (the wolf chief), Mato-Topé (the four bears), Dipauch (the broken arm), Berock-Itainu (the ox neck), Pehriska-Ruhpa (the two ravens), and some others.

The view of the prairie around Fort Clark was at this time highly interesting. A great number of the horses were grazing all around; Indians of both sexes and all ages were in motion; we were, every moment, stopped by them, obliged to shake hands, and let them examine us on all sides.

June 24, 1833

Following the numerous windings of the Missouri, from one chain of hills to another, we reached, at seven o'clock in the evening, the mouth of the Yellowstone, a fine river, hardly inferior in breadth to the Missouri at this part. A little further on lay Fort Union, on a verdant plain, with the handsome American flag, gilded by the last rays of evening, while a herd of horses grazing animated the peaceful scene.

The Company maintains a number of agents at these different stations; during their stay they marry Indian women, but leave them, without scruple, when they are removed to another station, or are recalled to the United States. The lower class of these agents, who are called *engagés* or *voyageurs*, have to act as steersmen, rowers, hunters, traders, &c., according to their several capabilities. They are often sent great distances, employed in perilous undertakings among the Indians, and are obliged to fight against the enemy, and many of them are killed every year by the arms with which the Whites themselves have furnished the Indians. Some of the agents of the fur company winter every year in the Rocky Mountains.

Wild beasts and other animals, whose skins are valuable in the fur trade, have already diminished greatly in number along this river, and it is said that, in another ten years, the fur trade will be very inconsiderable. As the supplies along the banks of the Missouri decreased, the Company gradually extended the circle of their trading posts, as well as enterprises, and thus increased their income. Above 500 of their agents are in the forts of the Upper Missouri, and at their various trading posts; and, besides these individuals, who receive considerable salaries (for it is said that the Company yearly expend 150,000 dollars in salaries), there are in these prairies, and the forests of the Rocky Mountain, beaver and fur trappers, who live at their own cost; but whose present wants, such as horses, guns, powder, ball, woollen clothes, articles of clothing, tobacco, &c. &c. are supplied by the Company, and the scores settled, after the hunting season is over, by the furs which they deliver at the different trading posts. Many of these, when not employed in hunting, live at the Company's forts. They are, for the most part, enterprising, robust men, capital riflemen, and are able to endure the greatest hardships.

Daybreak at Fort McKenzie, August 28, 1833, brought with it a war party of some 600 Assiniboins and

Fort Union to Fort McKenzie
July 6—August 9, 1833

[Although in years to come steamboats would eventually venture farther upstream on the Missouri, in 1833 Fort Union was the head of steamboat navigation on the river. Cargoes destined for posts farther west had to be transported either overland by pack train or upriver by keelboat.

The keelboat Flora that carried Maximilian and his party upstream measured sixty feet overall and had a beam of sixteen feet.]

Crees who attacked an encampment of Blackfeet just outside the Fort. Bodmer's dramatic re-creation of the battle captures the chaos, fury and savagery described in Maximilian's dramatic description.

Fort McKenzie
August 15, 1833

Our residence was besieged all day long by Indians who were attracted by our drawing and writing. They said about Mr. Bodmer, after he had executed a portrait, that he could "write" well.

In the evening, we went to the tents of the Indians, where we saw at least six women whose noses had been cut off. This is the way in which the Piegans and other Blackfeet nations punish the infidelity of their women, a hideous disfigurement.

August 28, 1833

At break of day, we were awakened by musket-shot, and Doucette entered our room, crying, "Levez-vous, il faut nous battre," on which we rose in haste, dressed ourselves, and loaded our fowling-pieces with ball. When we entered the court-yard of the fort, all our people were in motion, and some were firing from the roofs. On ascending it, we saw the whole prairie covered with Indians on foot and on horseback, who were firing at the fort; and on the hills were several detached bodies. About eighteen or twenty Blackfoot

A Mandan warrior spends days and nights in ritualistic obeisance before deities symbolized by effigies.

tents, pitched near the fort, the inmates of which had been singing and drinking the whole night, and fallen into a deep sleep towards morning, had been surprised by 600 Assiniboins and Crees. When the first information of the vicinity of the enemies was received from a Blackfoot, who had escaped, the *engagés* immediately repaired to their posts on the roofs of the buildings, and the fort was seen to be surrounded on every side by the enemy, who had approached very near. They had cut up the tents of the Blackfeet with knives, discharged their guns and arrows at them, and killed or wounded many of the inmates, roused from their sleep by this unexpected attack. Four women and several children lay dead near the fort, and many others were wounded. The men, about thirty in number, had partly fired their guns at the enemy, and then fled to the gates of the fort, where they were admitted. They immediately hastened to the roofs, and began a well-supported fire on the Assiniboins.

In the fort itself all was confusion. If the men had been mustered and inspected, it would have been found that the *engagés* had sold their ammunition to the Indians; they were, therefore, quite unprepared to defend themselves, and it was necessary, during the combat, to distribute powder as well among the Whites as the Indians.

Assiniboins and Crees vs. Blackfeet

Mr. Mitchell and Berger, the interpreter, were employed in admitting the Blackfeet women and children, who were assembled at the door of the fort, when a hostile Indian, with his bow bent, appeared before the gate, and exclaimed, "White man, make room, I will shoot those enemies!" This exclamation showed that the attack was not directed against the Whites, but only against the Blackfeet. Mr. Mitchell immediately gave orders to his people to cease firing; notwithstanding this, single shots continued to be fired, and our Blackfeet were not to be restrained, nay, ten or twelve of our people, among whom were Doucette and Loretto, went into the prairie, and fired in the ranks of the Blackfeet, who were assembling, and every moment increasing in numbers. Loretto had shot, at the distance of eighty-six paces from the pickets, the nephew of the Assiniboin chief, Minohanne (the left-handed), and this was the only one of the killed whom the enemy were unable to carry away, for we saw them lay many others on their horses, and take them off. In the fort itself only one man was wounded, having had his foot pierced by an arrow, and likewise a horse. . . .

When the Assiniboins saw that their fire was returned, they retreated about 300 paces, and an irregular firing continued, during which several people from the neighbourhood joined the ranks of the Blackfeet.

Although tepees were used on hunting trips, Mandans and Minnetarees, sedentary tribes, enjoyed better permanent homes than other Plains tribes. Lodges were built of heavy timber, wickerwork and sod.

While all this was passing, the court-yard of the fort exhibited very singular scenes. A number of wounded men, women, and children, were laid or placed against the walls, others, in their deplorable condition, were pulled about by their relations, amid tears and lamentations. The White Buffalo, whom I have often mentioned, and who had received a wound at the back of his head, was carried about, in this manner, amid singing, howling, and crying; they rattled the schischikué in his ears, that the evil spirit might not overcome him, and gave him brandy to drink. He himself, though stupefied and intoxicated, sung without intermission, and would not give himself up to the evil spirit.

Otsequa-Stomik, an old man of our acquaintance, was wounded in the knee by a ball, which a woman cut out with a penknife, during which operation he did not betray the least symptom of pain. Natah-Otann, a handsome young man, with whom we had become acquainted, was suffering dreadfully from severe wounds. Several Indians, especially young women, were likewise wounded. We endeavoured to assist the wounded, and Mr. Mitchell distributed balsam, and linen for bandages, but very little could be done; for, instead of suffering the wounded, who were exhausted by the loss of blood, to take some rest, their relations continually pulled them about, sounded bells, rattled their medicine or amulets, among which were the bears' paws, which White Buffalo wore on his breast.

A spectator alone of this extraordinary scene can form any idea of the confusion and the noise, which was increased by the loud report of the musketry, the moving backwards and forwards of the people carrying powder and ball, and the tumult occasioned by above twenty horses shut up in the fort. The enemy gradually retreated, and concentrated themselves in several detachments on the brow of the hill, and this gave us an opportunity to open the gate, with due precaution, and view the destroyed tents and the bodies of the slain. The Indian who was killed near the fort especially interested me, because I wished to obtain his skull. The scalp had already been taken off, and several Blackfeet were engaged in venting their rage on the dead body. The men fired their guns at it; the women and children beat it with clubs, and pelted it with stones; the fury of the latter was particularly directed against the privy parts. Before I could obtain my wish, not a trace of the head was to be seen.

At the very beginning of the engagement, the Black-

feet had dispatched messengers on horseback to the great camp of their nation, which was eight or ten miles off, to summon their warriors to their aid, and their arrival was expected every moment.

From the place where the range of hills turns to the Missouri, more and more Blackfeet continued to arrive. They came galloping in groups, from three to twenty together, their horses covered with foam, and they themselves in their finest apparel, with all kinds of ornaments and arms, bows and quivers on their backs, guns in their hands, furnished with their medicines, with feathers on their heads; some had splendid crowns of black and white eagles' feathers, and a large hood of feathers hanging down behind, sitting on fine panther skins lined with red; the upper part of their bodies partly naked, with a long strip of wolf's skin thrown across the shoulder, and carrying shields adorned with feathers and pieces of coloured cloth. A truly original sight! Many immediately galloped over the hill, whipped their tired horses, in order to take part in the engagement, shouting, singing, and uttering their war-whoop; but a great part of them stopped at the fort, received powder and balls, and, with their guns and bows, shot at the disfigured remains of the Assiniboin who was slain, and which were now so pierced and burnt as scarcely to retain any semblance of the human form. As the Indians near the fort believed themselves to be now quite safe, they carried the wounded into the leather tents, which were injured and pierced through and through by the enemy's balls, round which many dead horses and dogs were lying, and the crying and lamenting were incessant.

Fort McKenzie to Fort Clark
September 14—November 8, 1833

[Maximilian turned his face downstream. His new plan was to ship down the Missouri past Fort Union to Fort Clark and there emulate Lewis and Clark by spending the winter living with the Indians.

All told, Maximilian and his two companions were to spend nearly five-and-a-half months at Fort Clark, living through an unusually brutal winter under primitive conditions. Over the months the white population fluctuated at about a dozen, sometimes less, which was just as well since the fort was frequently on starvation rations, and, as a result, Maximilian contracted scurvy. Despite the bitter cold, food shortages and his illness, however, the prince worked away through the winter with his usual diligence. All winter long a procession of Indians trooped through the Europeans' drafty quarters and posed for hours on end as the artist worked on their portraits.]

April 14, 1834

A main point now was my recovery, which was singularly rapid. At the beginning of April I was still in a hopeless condition, and so very ill, that the people who visited me did not think my life would be prolonged beyond three or, at the most, four days. The cook of the fort, a Negro from St. Louis, one day expressed his opinion that my illness must be the scurvy, for he had once witnessed the great mortality among the garrison of the fort at Council Bluffs, when several hundred soldiers were carried off in a short time. He said that the symptoms were in both cases nearly similar; that, on that occasion, at the beginning of spring, they had gathered the green herbs in the prairie, especially the small white flowering *Allium reticulatum*, with which they had soon cured the sick. I was advised to make trial of this recipe, and the Indian children accordingly furnished me with an abundance of this plant and its bulbs: these were cut up small, like spinage, and I ate a quantity of them. On the fourth day the swelling of my leg had considerably subsided, and I gained strength daily. [Maximilian departed from Fort Clark three days later.]

April 18, 1834

The weather was favourable, though there was a strong wind from the southwest. Some cannon-shot were fired by the fort as a farewell salute, and we glided rapidly down the beautiful stream of the Missouri.

[Maximilian's voyage down the Missouri to St. Louis was accomplished in the company of Bodmer, Dreidoppel, a crew of four Company *engagés*, the two caged bears, and occasional river passengers. After an absence of 13 months the party arrived in St. Louis on May 27, 1834. The great adventure was over.]

Bodmer's paintings were not only ethnographically accurate, they were also pure, decorative works of art, as in portrait of the Mandan, Flying Eagle.

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What could be nicer than the authentic, instant nostalgia engendered by this glimpse of life on a Litchfield sidewalk. We know it is of today: witness the boy's mod sport shoes at left.

By Jane Holtz Kay

How a post office can also be the heart of a village

Homely, yet gracious, the post office at Litchfield is a place to buy a stamp or catch up on news.

It is not only big cities that wither when their centers are defocused—in the country, too, the towns need the pulse of people

"Someone said the post office was a great place for a 15-minute chat and a ten-cent stamp," scoffed a town official. Inefficiency. Loitering. It went against his grain, you could see. But he need not have worried. Four weeks later, the ten-cent stamp was gone. And, four months after, the Litchfield Post Office looked to do the same.

It would be moved to a steel, glass and limestone box set in a drive-in mall with lots of asphalt. Drive in, drive out. No more inefficiency. No more standin' on the corner either; no more corner; no sidewalks, for that matter. No more the mother passing time with a neighbor while her baby yowls in the mail room. No more old folks taking the daily walk to meet friends and, as the man said, only incidentally stopping to pick up mail. No more all the chance meetings, the errands, the small talk—the life of small-town America.

It would be hard to call the move of the post office from the corner of this picture-book Connecticut town a tragedy. On the global scale (of urban removals and ozone ruptures), the fate of a place not much bigger than a postage stamp itself didn't loom large. To some, however, it was large as life. It was town life itself.

"I conduct my business on the sidewalk there all the time," former First Selectman Robert Cooley, who'd fought to stop the relocation to a new $300,000 structure some half a mile away, was saying.

"Some of the older people got up on the verge of tears," Clifford Cooper says, recalling the town meeting where they first broke the news. Cooper is an architect who left New York City, a hundred or so miles away, for this village life-style. He feels "comfortable" here. He is worrying that his neighbors will care less for those comforts—the sidewalks, the cobbled courtyard, the shops, and all the notions of a smile and a handshake—when they could sit behind the wheels of their cars spinning off to the bleak box of the new post office. "I don't want what happened to where we came from to happen here," he says firmly.

Yes, Cooper understands the tears. So does Cooley. He knows why so many people signed his resolution against relocating the post office. "Whereas . . . whereas . . ." it went on for three pages, a lot of words sent to Washington and Hartford capitals, but probably not enough. They both know why the post office taps the wells of feeling for many in this town of some 8,000, why the signers would fight to save a 90-year-old whitewashed brick building, a simple storefront, that invites no architectural odes.

What are they fighting to preserve?

It is easier to see why people would fight to preserve the aristocratic, historic *town* of Litchfield itself.

From the east, along Route 118's twining country road, the white houses dot the contoured hills like a Grandma Moses canvas, and the green lawns go on and on. A doll's house of a town. Walk four minutes east or west along the grassy mall at its center and you pace off almost as many spires on its white churches. Drive down historic South or North Streets and see the old estates standing glove to glove: "white elephants." They are prized specimens of Federal architecture. No wonder they won National Historic District standing.

Jane Holtz Kay writes on architecture for The Nation.

Color photographs by Marvin E. Newman

Ted Litwin, Litchfield selectman: "Plan? Walter, have we a plan?"

North Easton realtor Freitas: "It used to be the 100 percent location."

Strategy meeting: members of Litchfield Postal Site Committee.

"The post office is like a gateway," designer Hans C. Seherr-Thoss explains one rainy day. On the south corner of the L-shaped center, the post office "introduces" the shops that serve the town. It is the linchpin between the whole town and the commercial townscape. Unfix it, he fears, and you unfix the whole social and economic life. "I feel that a town should grow from the center." Most planners would agree. Abandon the center, and you abandon the life of Litchfield. Without a purpose, a social place, Litchfield is another suburban bedroom, or a museum of antiques.

Today, Litchfield's center still lingers as a true center—social, economic, human. You still see the equivalent of the butcher, the baker, the candlestickmaker. Such Main Streets may not be flattened or forsaken like the inner cities of the 1960s, but they too have suffered the ravages of the suburban life-style: sprawl drains once-rural towns as it has diminished their urban kin. For as Americans scuttled outwards to the lone house on the lone lot fed by post-World War II mortgage loans, the small centers withered in parallel ways. Like the bigger business centers, they showed neglect. Did anyone care about the attrition?

Less than half a mile away from the center of Litchfield, a large supermarket, an island in asphalt, beckons. The malls—accessible by car—are digging in.

Cars, more cars again—and our failure to control them—that is no new notion, but still the sad insignia of the auto age strike the eye anew on another day at another historic New England town.

The town is North Easton, Massachusetts. Here stands the impressive Oakes Ames Memorial Hall, one of many splendid structures that H.H. Richardson built for the elite of this town. North Easton became a museum to his architecture. Here too is the Rockery, a "mound" of landscaped rock and trees superbly shaped by another 19th-century master, Frederick Law Olmsted of Central Park fame. "A unique mix of monuments," says historian-architect Lee Tabor of the Massachusetts Historical Commission.

No post office greets you as "gateway" to this historic town either. Instead, your first view of the center is a wall where a Sunbeam bread billboard beams "Not By Bread Alone" and a shoddy metal awning lowers its sleazy brows over the view of Main Street. Forty miles south of Boston, North Easton's town center is scarcely the Litchfield enclave. "It isn't a precious town center," as Tabor says. "It isn't 'Colonial.' " The commercial structures don't hold a candle to many. "But the buildings are of a human scale," he says, and the Richardson collection is incomparable.

The potential is there. But, for now, Main Street, North Easton, strikes you as lean, to say the least—the shops lackluster; the sidewalk broken up by garages, parking lots and helter-skelter cars. The future looks bleak behind the dusty windows. "There are no conversions going on that would assure its life," Robert Brown, North Easton architectural historian, puts it. The red, white and blue Bicentennial trim does not hide the fact that there is a boarded-up wooden structure dead center on Main Street. The building, O'Connor's News Store, "used to be the 100 percent location," realtor Louis Freitas says, describing the spot. A well-groomed, gray-suited businessman, Freitas remembers a brisker era in his childhood and how "business activity deteriorated over the years. Then the building burned." There is little interest in restoring it now. No one seems to much want to fix the

Architect Cooper. He left New York for Litchfield, feels comfortable.

Architectural historian Brown: "a balance between pluses and minuses."

town center either. "At one time," Freitas remembers, "there were seven or eight markets." The grocers would deliver the S.S. Pierce goodies to the Ames' kitchen. The Ames family, with its shovel-making money, patronized the markets and the architects alike. Now neither the market nor the Ameses are around and most folks just tool off to the Fernandes supermarket down the road a piece.

Elsewhere in the town, the Richardson legacy lingers in patches of beauty; the work of the portly 19th-century genius of design still draws crowds. While the monuments appeal, they also present monumental expenses. The Oakes Ames Memorial Hall roof, for instance, will cost $120,000 to repair, and the sons and daughters of the Ames sons and daughters who once maintained it lack funds, or concern, or both.

Systems. Ecology. Call it what you will. Today there is a new total world view. Fairy-tale places like Litchfield, architectural meccas like North Easton, are seen as organisms, part of larger systems to be nurtured as a whole. Not cell by cell but as a total village life; not just the coffee-table collection of living-room architecture, but the working kitchen, the town center. "The problems are complicated when you're dealing with the center," Lee Tabor admits. "There are problems of value judgments, problems of economics." Realtor Freitas is dour as he confirms the "complexities" some days later. Without funds, "the best plans are no good," he says, notching off the businesses that have slowly slid from the center. "There are historic district and Bicentennial and park funds," historian Bob Brown agrees, "but it's a balance between the pluses and the minuses because the business community has not said this is an OK place."

Nor, to return to the Offending Angels of Litchfield, has the post office.

Perhaps it is not fair to use the post office as scapegoat for America's autophilia. Smallness has had a tough time in the whole country these decades—whether small business or small town. The U.S. Postal Service is a cog in a vast machine, following the orders of Congress and marching to Progress as Americans have always marched.

Still, by numbers alone, the Postal Service is abandoning thousands of such drop-in post offices—and the post office is, as it has always been, a symbol.

The post office is a symbol: a symbol of a government reckoning that rarely counts in human and spiritual values. And, as critic Ada Louise Huxtable has said of churches, it is such places that help supply them; they provide the "anchor to the past, an identity of place and testament to human endeavor without which cities are increasingly amorphous and alienating." There is no slot for alienation in the government cost accounting; federal policy fails to consider the implications of its myriad constructions on the environment. Finally, federal "economies" forget the costs for the higher energy of the new sealed-off architecture, the cost of gas-draining locales, and the social costs as small towns shrivel and their populations glut cities. (The Postal Service may not have even calculated its in-house figures quite right, some say. Three years ago, a Congressional committee posed "fundamental questions" about the plan for "mechanization and greater volumes" which lies behind the local closings of post offices serving millions of rural Americans, according to the *Wall Street Journal.* When the committee toured the new quarters, it found intolerable noise

Handsome fireplace, embellished by Saint-Gaudens relief, graces library interior in North Easton.

Oakes Ames Memorial Hall is badly in need of repair, as it faces encroachments of car age.

levels, inconvenient plants, rodent-infested new buildings and, in at least one case, a facility "too large to be efficient." Sorter machines in Cincinnati didn't work, they said; in Memphis, the cost of grading the facility site exceeded half a million; and, finally, one of the plans was a mere "toy in the hands of the developers and dreamers who are financing it.")

"You have to say 'whose economies?' " as Carleton Knight III, assistant editor of *Preservation News*, puts it, from his Washington office. To save small-town life through such working structures, "you have to ask 'why.' You have to have an architect look at the place. You have to get your own figures." *Preservation News* is housed in the headquarters of the National Trust for Historic Preservation, which publishes it; behind the editor, the in-boxes stand in a line and the letters asking such questions lap over the top. Close to 50 Litchfieldlike issues get aired in his paper each month, and the letters still come. Membership in the National Trust has tripled in three years and the members press on. They address the private developers. "They're out to make 15 percent, not 10 percent profit," says Knight shaking his head. "It's the American way," he adds dryly. They fight the public builders, too.

Downcast in Litchfield

It was a gloomy day in Litchfield last fall. A veil of cold rain covered the windshield as we sat in the parking lot behind the town center viewing a worm's eye tangle of security fences, off-angled cars, chipped paint. Behind the wheel of his station wagon, designer Hans Seherr-Thoss was downcast. The ruddy-cheeked head of CORRHAL (the Committee on Rehabilitation and Restoration of the Historic Areas of Litchfield) and leader of the post office struggle, sighed. "I was very inexperienced in handling government agencies," he says. He was very polite, very trusting. Too much so. "They're executives," a nonexecutive later says, describing the fight. "They're aristocrats from the Hill. They don't know how to get down and chew on the issues."

The skirmish seemed close to a sorry end and Seherr-Thoss and CORRHAL were looking toward a bigger battle: the town center.

"The fiendish thing is that there's no overall plan for the town," Seherr-Thoss goes on, "and here you have a federal agency—the U.S. Postal Service—that says 'we want to do something tomorrow.' " With every word his pale brows dip; he hits the steering wheel for emphasis and his voice grows angry at the foolishness whereby the fate of a centuries-old town is decided in scant months, and the government doles out more than $300,000 to abandon where it might rejuvenate. "They're in such a hurry to spend that money but they

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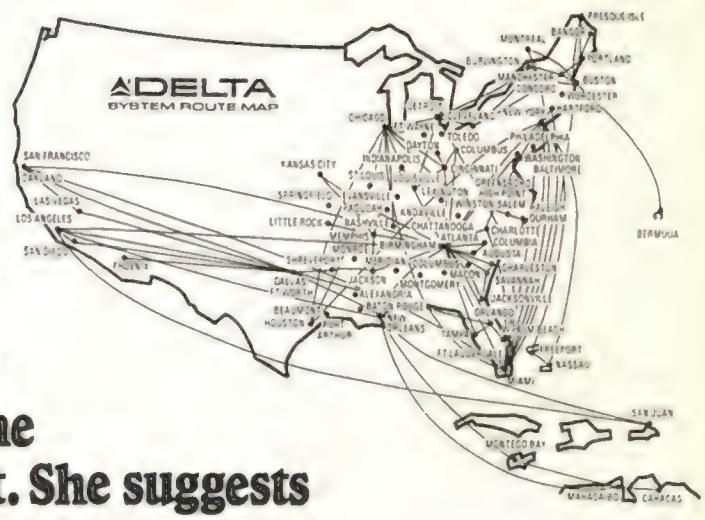

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never question how it fits in larger goals," he says. They don't consider land use as a whole. "The master plan lies on the shelf. No one quotes from it. No one uses it," he says. "Land use is basic."

"Land use? Plan?" Ted Litwin, the First Selectman of Litchfield, wonders later that day in the Town Hall just across the green. "Uhhh, plans?" he frowns over the top of his horn-rimmed glasses. "Plan?" he calls. "Walter"—he goes to the door to page the town assessor —"have we a plan?"

Born on a farm 50 years ago and not on the aristocratic hill of white houses, Litwin is the first Democrat in 40 years to be elected First Selectman. "One of those inherited beauties," he says of the controversy that he must now arbitrate. Litwin is a self-described "country person" and an agricultural bureaucrat by trade, and cares little for the center, its sidewalks, its shops. Yet he is not uncaring. Like the environmentalist who is dewy-eyed for vanishing birds and animals but less so for their global sources, Litwin does care where issues touch the farmlands.

Fragments of feeling, each in its own narrow slot on that grim day: the Department of Community Affairs out charting the town's historic houses; HUD funding money to push an old school back a few feet on its lot, but nothing to support or revive the main street. Money to stroke historic and esthetic feelings in the private zones of the town, to power the new windowless post office and its polluting trucks, but not a nickel, though, to fight for the nitty-gritty life of the center. Or so it seemed.

And yet when the fragments seemed most fractured, something happened in Litchfield: fragments joined, making connection.

Suddenly, with the post office as doomed as the ten-cent stamp, the town started to speak up. Historian J.P. Sadler was typical. The architectural historian put down his pen, so to speak, on the last chapters of his book, only to pick it up again in behalf of the post office next door: a letter a week went to the local paper, questions to officials. His wife Jacquelin, an even more active counterpart, worked on the site committee itself. "If I had any stature in the outside world, I might as well get involved," Sadler declared. Others called meetings. A new Postal Site Committee was formed in February and charged with analyzing and proposing alternative facility sites. Their report and recommendation was to be filed within a hundred days. Statements were issued. The Postal Service was pressed. Gadflies buzzed. A winter of malcontent with the post office passed in to a spring of action: well-connected Litchfield residents, finally alert to the imminent move, hooked up to the proper connections. Cousins called cousins. We are a National Historic District, the new activists reminded the National Advisory Council on Historic Preservation in Washington. The Council sent historian Jordan Tannenbaum to sit in on the hearings in the early spring. In June, the clamor from small-town postal closings across the country gave Connecticut Congressman Toby Moffett common cause with two West Virginia Congressmen as he demanded impact statements. By the time the buzzing died down this summer, the new postal site on the highway had been rebuffed. A boldface box in *The Litchfield Enquirer* exulted: "Post Office Presents Plans for Alteration to Present Site," it read. "It appears to be something we can live with," the U.S. Postal Service concurred. Fragments had joined and pressed and, it is hoped, insured that growth will go on in the proper direction.

"And always I ask 'What kind of growth do they need?' " Seherr-Thoss had said. And where, and how, and why—the questions that Litchfield addressed still go on everywhere. The farmer/selectman looking to save unsullied land; the architect/ex-urbanite looking for village life; the old people seeking old friends and continuity; the young sons and daughters just passing a semester out of school; the druggist and the professional pundits—all must ask it as they seek to make life viable for historic, and ordinary, neighborhoods. Fragments of people and fragments of need have yet to cohere to do so. But perhaps the place they can meet is on Main Street, walking street, USA—the classic center of an organic townscape. Whether posh or mundane, whether in our inspired Litchfields or North Eastons, it is only such joined and total caring that can create a cared-for or livable town life.

Vaulted ceiling of Ames Free Library soars in splendor, another North Easton treasure.

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Graphic arts curator Peter Marzio shows off neon corner in History and Technology's exhibit.

By Peggy Thomson

Neon—a dazzling thing to collect

Ethnic food signs, blazing in 'A Nation of Nations' at the Smithsonian, salute immigrant merchants with names in lights

Neon signs are devilish to handle; Franklin Illedge works in static heat to repair cracked letters.

Neon is a curious sort of art, says Peter Marzio, and collecting neon a curious activity for a graphic arts curator. He laughs about the figure he cut, going into ethnic restaurants and groceries, asking not for bagels or a pizza, but for the neon sign in the window. Many of the shop owners were foreign-born. "Some didn't understand English. Others did, but still didn't understand why I wanted it. They squinched up their eyes," he recalls, baffled by his proposal to take away their sign and replace it with a copy.

"I said, 'It's your sign we want. By touching it you blessed it. We want your sign for the Smithsonian.' "

Marzio got a few turndowns, more than one from people who knew a "collector" from Washington must only come from Internal Revenue. One from a fellow with an underground shop on New York's Eighth Avenue subway line, who said a sign that was good enough for a museum was good enough to get him $2,000. "I said, 'For three little words? For French Ice Cream? You've got to be kidding!' You'd think, from the argument we had, that we were negotiating for the whole shop."

Now the signs are up, in the Museum of History and Technology's new exhibit called "A Nation of Nations." There are 32 of them from 19 nationalities, in one great black display area—black ceiling, black felt walls, black carpeting. They're a jumble of illuminated scribbling, sorting itself into messages like "Kuan Sing Dumpling House," "Irish-Rose Bar Grill" and a sausage-shaped "Warsaw Foot Long."

Marzio and his assistants searched through city neighborhoods in Cleveland, Washington, Harlem, Spanish Harlem, Brooklyn—some neighborhoods so closed they sensed unwelcoming vibrations as soon as they set foot on the sidewalks. They photographed 700 of the best candidates, narrowed the field down to 50, then paid calls on the owners.

Limitations of space ruled out jumbo signs from the Las Vegas "Strip" as well as a 30-foot fire-breathing dragon from New York's Chinatown. Among others he got: a then rare "Vietnam Restaurant" sign, Joe's "Sicilian Pizza" with a chef twirling a pizza crust, Solamone's "Fresh & Smoked Fish," its lettering enclosed in a fishy outline. "La Viña Spanish American Restaurant" features a green palm tree, blue pig, red chicken, pink crab, blue fish, red lobster, plus an orange-eyed pink bull and a pink coffee cup sending up a plume of blue steam. The "Gypsy Tea Kettle Tea Leaves Read Gratis," picturing a Gypsy woman with a nutcracker profile, is the only copy in the collection; the original was too large.

The collector is partial to his hybrids: "Goldberg's Pizzeria," the "Italian-French-Spanish Bakery," and "Asia Restaurant, Comidas Criolias Chino Cubano." (A Chinese Rathskeller sign was too tall to use.) Par-

tial also to the "Middle East Groceries," not for anything special, just for the short, thick letters, green and pink. Marzio is pleased, in fact, with the lot.

"People expect neon to be vulgar. I think they're surprised at how captivating it is, how noncarnival. There's just something nice about the colors and proportions, about the way they do the lettering. It was a personal, inexpensive and individualized way for many immigrants to put their name and language on an American street."

But neon tubing is inflexible, brittle, tough to handle. It stacks badly, is quick to crack. The fanciers of neon, a French invention at the turn of the century, are afraid no one 100 years from now will know the industry existed. Only a handful of *skilled* craftsmen are left even in New York, where Times Square in the Thirties and Forties was one fabulous splotch of neon —a "neon city."

Signs that were damaged while being installed in the museum had to go back to Service Neon in Springfield, Virginia. There glass benders still practice the craft in an alchemist's setting of flames and glass, flashes, bursts of ear-ringing din, smoke and the smell of burning. Franklin Illedge attends, for example, to the cracked "u" in Restaurant. He taps out the old u, welds in the new to match, having gone through all the ritual of synchronized puffing and arm swinging to bend the hot glass. He vacuums the air and impurities out from Restaurant, once again a labyrinth, intact. He zaps the tube with 30,000 volts from the overhead high-tension wire. Then he pumps in the gas—the combination of neon or argon with phosphor coatings inside the tube that accounts for the color. If it all looks like lightning and smells like lightning, it's because smoke and fire come from the heat and the black paint used to block out spaces between letters on the sign he's repairing.

From an apprenticeship of "millions of beer signs" in his native Colombia and 16 years of neon work in America, Illedge moves unhurrying amongst his transformers and standing burners. Asked if he has ever burned himself, he says, "Every day." He recently demonstrated his skills at the Smithsonian's Festival of American Folklife.

Neon isn't dead but it's being driven to obscurity by new forms of sign making. At a right angle to the neon section in "A Nation of Nations" is a wall of signs making a counterpoint: an American image abroad. That wall features mass-produced, contemporary signs of fluorescence and Plexiglas: Kentucky Fried Chicken and McDonald's in Japanese, Holiday Inn in Arabic, Levi's (on Michelangelo's David) in Italian and Pepsi in Russian, French, Chinese, Arabic, German, Indonesian, Japanese, Finnish and Dutch. There is even a slick Marlboro sign in Amharic (Ethiopia). They are all part of America's corporate image abroad. But it's not neon. By comparison, neon is the stuff of nostalgia.

Bright letters and sketches in neon lights celebrate hyphenated Americans who set up shop, usually with native foods, sometimes with such hybrid places as the "Italian-French-Spanish Bakery" seen below.

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By David C. Driskell

Art by blacks: its vital role in U.S. culture

A comprehensive exhibition from a group which developed from days of slavery begins a cross-country tour in Los Angeles

Museum of African Art, Frederick L. Weingeroff Collection

Edward Mitchell Bannister, an outstanding 19th-century artist, painted *Newspaper Boy* in 1869.

In the vanguard of black artists of the 1930s who began to paint their people's experience and

The purity of the artistic traditions imported to Colonial America in the mid-1600s was, over the years, largely dissipated by an assimilating nation. Those ethnic forms which survived, however, often continued a heritable link with their origins, exposing important segments of the diversity of our background.

The knowledge we have of distinct ethnic diversity in our nation's culture comes mainly out of the European tradition. Long overlooked, and only recently beginning to be recognized, are the cultural contributions people of African ancestry made to the visual heritage we enjoy as Americans. The United States is being made aware of the rich visual culture black

The Heritage Gallery, Los Angeles

aspirations was Charles White, educator as well as painter. This is his lithograph, *The Prophet #1.*

Americans brought with them from Africa and have continued to develop ever since.

The contribution is comprehensively displayed in a retrospective exhibition which just opened at the Los Angeles County Museum of Art, where it will continue through November 21, sponsored by the National Endowment for the Humanities and Philip Morris Incorporated. The exhibit, "Two Centuries of Black American Art," will travel to the High Museum of Atlanta, the Dallas Museum of Fine Arts and the Brooklyn Museum, closing there on August 21, 1977.

Black American culture, though often thoroughly integrated into popular forms of European American culture, has managed to maintain some of the characteristics of its African origins in spite of the assimilation which has taken place in the New World.

The diversity of artistic skills brought by Africans to these shores was far-ranging. Among them were "woodworkers" (actually sculptors), builders, ironsmiths, textile artisans, couturiers, potters and goldsmiths. The services of these artisans provided an important foundation of the crafts tradition in our nation at a time when skilled labor was highly cherished and relied upon as an important element of the national economy.

They were not, however, trained in the fine art of traditional European painting. African artists, rather, decorated their masks with natural pigments and used dyestuff of various kinds to embellish textiles and their own bodies. The ancient arts of rock and cave painting employed the use of pigments of different types as did the decoration of certain shrines for specific religious celebrations. But the art of painting portraits, landscapes and still life was not a common practice among Africans living in the sub-Sahara regions.

The most naturally adopted forms done by blacks in the visual arts that have survived can be found in Colonial-style plantation architecture, and in folk crafts. Houses were constructed in a manner which permitted traditional African designs to be used serviceably on some plantations where a few sympathetic slaveholders allowed their "property" to exercise artistic skills. But from this rank of illiterate slave-artisans came artists and craftsmen whose works, if not their stations, were peers of any produced in America during the period. There was, for example, Joshua Johnston, (c. 1765-1830), probably a freed slave who lived in Baltimore. His notable talent as a portrait artist was eagerly sought by wealthy planters and sea merchants living on the eastern shores of Maryland and Virginia.

Skilled carpenters of African ancestry were eagerly sought during the 18th and 19th centuries to make cabinets and furniture and to design and build homes, churches and public buildings. A prominent Mississippi landowner, J.M. Gibson, wrote in his memoirs that "a Negro mechanic slave" designed and supervised the construction of the Vicksburg courthouse, a landmark of historic significance built prior to the Civil War.

As early as 1825, Thomas Day, one of the most widely regarded furniture makers of the post-Colonial period, had established his reputation among craftsmen in the southeastern part of the country. He commanded handsome prices for fine furniture, mostly of imported mahogany, made in his shop in Milton, North Carolina.

Professor Driskell is chairman of the Fisk University Art Department and was guest curator of "Two Centuries of Black American Art."

The professional distinction which Robert S. Duncanson (1817-1872) brought to the art of landscape painting was not surpassed even by the American masters of the Hudson River School. Duncanson's craft was outstanding. His paintings were collected by European royalty. He made several visits to Great Britain where his work was widely acclaimed by critics who felt that he was among the finest landscape artists living in the Western world.

In 1876, four years after Duncanson's death, Edward Mitchell Bannister (1828-1901), a painter from Providence, and Edmonia Lewis (c. 1843-1900), a sculptor from Boston then living in Rome, submitted works to the nation's Centennial Exposition in Philadelphia. Much to the surprise of both artists, their works were accepted and exhibited. Bannister won a medal in painting for his celebrated landscape, *Under The Oaks*. Miss Lewis submitted a marble sculpture called *The Dying Cleopatra*. It too received an award, though she was not on hand to receive it. When Bannister appeared to accept his award he was told that a mistake had been made. A mulatto, with prominent Negroid features, he was about to be turned away from an event in which he had been singled out to receive one of the most important honors ever to be bestowed on a living American artist. Reason prevailed, however, and Bannister was permitted to view the exhibition.

In 1901, at the time of his death, he had produced more paintings than any other artist of African ancestry working in America, many only recently rediscovered and hailed as worthy contributions to the Barbizon school of painting.

Bannister was a true romanticist in that he attempted to capture in painterly form a harmonious relationship between what he saw in the natural world and the way he felt nature to be as seen in his mind's eye. For the artist, a merger of these two ideals was sufficient to produce the romantic interpretation of nature achieved through the poetic insight he infused in all of the landscapes he painted. He ventured into portrait painting only as a supplement to his interpretations of the land and sea, subjects which he loved and found more rewarding than any other.

His zeal for cultural emancipation, establishing himself as an artist responsive to his times, did not leave an excessive amount of time to devote to subjects espousing racial pride. He was aware of the evils inbred into the American system by slavery and segregation of the races, but sought first to prove himself to be an artist whose talent could be looked upon as inferior to none.

There is no record of Bannister ever having met Edmonia Lewis. The two artists had little in common beyond exhibiting and working in the same period. Miss Lewis' work followed the neo-classicist tradition while at the same time revealing a sensitivity of her own racial heritage and classical training in Rome. But Edmonia Lewis also responded to the call of a new prospect in art. Her themes projected a new order, that of the socially commentative artist whose subjects were both timely and relevant.

Encouragement in Rome

Her sojourn in Rome exposed her to all the great European masters, and she received encouragement from supporters at home as well as from teachers in Rome, which made her aware of the need to compete with artists other than those of her own race. She created works with titles that reflected the black American heritage of her parents. *The Dying Cleopatra*, for example, was created as a deliberate attempt to show the people of Egypt to be a vital force in the history of the continent of Africa.

A few black artists before Edmonia Lewis directed the service of their art to the aid of the abolitionist cause. One was Patrick Reason (1817- c. 1850), a graphic artist whose illustrations adorned many books, pamphlets and periodicals in which messages opposing slavery appeared.

The art of Henry O. Tanner (1859-1937) is more widely known than that of any other black American artist. Black Americans were not yet free when he was born in Pittsburgh on June 21, 1859. His religious upbringing largely determined the direction of his art. A student of Thomas Eakins at the Pennsylvania Academy of Fine Arts, he worked with some of America's most promising young artists. Eakins gave Tanner the encouragement he needed to sustain himself as an artist when he went to Paris in 1891. His exposure to French painting, particularly the entries he saw at the Paris Salon in 1892, made a lasting impression on

Los Angeles County Museum of Art, Mr. and Mrs. William Preston Harrison Collection

Trained in Paris where he achieved fame, Henry Tanner, best known of black American artists, painted *Daniel in the Lions' Den*, 1916.

Department of Art, Fisk University

Tanner relied heavily on religious feeling in his paintings, but his work also reflected a fine academic background, as in *Three Marys*.

National Collection of Fine Arts

William H. Johnson helped to shape young artists' interest in black feeling. This is *Mt. Calvery* (sic).

him. He examined very closely the art of the Impressionists who were still in vogue and adapted from them theories of color and light that brought about a change in his concept of painting and aided his technique. Tanner became more and more drawn to religious subjects and all but forsook subjects of a general nature for those which centered around the miracles and teachings of Christ.

By 1894 Tanner felt confident enough to enter the Salon. His first entry was accepted. He soon became a well-known personality in the art circles of Paris and his paintings were sought by American collectors as well. He turned his attention to Biblical subjects such as *Return from the Crucifixion, The Raising of Lazarus, The Annunciation, Three Marys* (see p. 89) and *Two Disciples at the Tomb,* which were executed with masterly skill. The Art Institute of Chicago purchased his *Two Disciples at The Tomb* in 1906. That same year, *Christ at the Home of Mary and Martha* was purchased by the Carnegie Institute Museum of Arts in Pittsburgh. *Three Marys* was exhibited at the Salon of 1910, and Tanner was also exhibited at the Panama-Pacific Exposition in San Francisco in 1915.

Tanner remained active as a painter and teacher until his death in 1937 in Paris, where he felt himself to be a free man, able to travel and work at will without the burdens of second-class citizenship imposed upon him in his native United States.

Meanwhile, in the United States in the 1920s, black Americans began asserting their interest in full cultural and racial emancipation by following the dynamic leadership that Alain Locke and W.E.B. DuBois brought to the American experience.

Although he strongly resisted the concept of a school of "Negro" art, Tanner at the time of his death could not help looking back with pride on the race progress made by a small group of artists whose work ushered into existence a new love of self and a definition of the black race. This strong realization became the lively signal for a new movement in art for persons of African ancestry living and working in the United States.

Several of Tanner's students returned to America and brought the good news of the success of the eminent black master in the art capital of the Western world. Perhaps more important were the visits that Alain Locke paid to Tanner's atelier, where he was well received as the black man's cultural ambassador. Locke's exposure to modern French art, particularly the experiments of Picasso and the cubists, helped to awaken in him the idea that black artists, too, should share the cultural arena in which images and forms derivative of African sculpture were being looked upon as the revolutionary new form. He returned to the United States to edit, in 1925, "The New Negro," a special issue of *Survey Graphic,* a magazine which reported on the achievements of black American artists. He began urging artists to create works of art which showed interest in the iconography of African art. In this dynamic form Locke saw the beginnings of a new style and spirit which would cause black artists to become aware of the beauty and character of African art. It was in this framework, Locke affirmed, that the American Negro was to take his rightful place as artist. Locke's idea formulated the theories later to be called "negritude" in Negro art. In "The New Negro," Locke created a manifesto for the New Negro Movement or the Harlem Renaissance, a period in

which black men and women worked together as a creative force unleashing a wave of talent in music, art, dance and literature unparalleled in the history of American culture.

After the end of World War I, a large number of black Americans left rural areas of the South. New York's Harlem became the center for black American culture in the 1920s, a city within a city, which gave a new voice to writers, poets, musicians and painters. Writers and poets, including such outstanding ones as Langston Hughes and Claude McKay, were in the vanguard of those who came to develop and share their talent and expectations. Musicians from all walks of life came from as far away as San Francisco and the cities of the Deep South.

The great migration after World War I swelled the population of the black city of Harlem to a million or more. Jazz musicians were in demand to entertain the hundreds of whites who floated uptown to Harlem nightclubs where things were happening nightly. The visual artists were challenged to create new images which reflected the posture of the New Negro. Black dancers acted out the locomotion of the machine age in their interpretations of the Charleston, the Truck and many other forms of motive expression which called for an agile body and a quick mind.

This was the age of black awakening in the arts, a renaissance among artists whose genius lay dormant in the period of slavery.

National Collection of Fine Arts

Johnson was also concerned with pure emotive form, as witness his *Harbor Under the Midnight Sun.*

Most promising among the young artists who came to Harlem was Aaron Douglas, an artist whose freshly painted images were a welcome relief to those who had been searching for new black forms. Douglas followed Alain Locke's idea that the ancestral arts of Africa held the key to the making of the new black esthetic. The functional esthetic of African art was to be transformed into a new synthesis of form and style which would permit the making of a new symbol capable of inciting and encouraging racial pride.

During the 1930s, artists such as Hale Woodruff, William E. Scott, Charles Alston and Charles White (pp. 86-87) painted murals in public buildings and at black colleges that touched upon the history and heritage of the black man in America. Most importantly, what emerged in the new expressions was the notion that black people, for the first time in the history of American culture, were seeing themselves through the eyes of their own artists; not as exotic and tragic creatures of circumstances as they were so often depicted by artists of the majority culture.

A healthy beginning

These years were a time of growth and movement for many black artists. The encouragement which they received from the Harmon Foundation and later the WPA permitted the work of many heretofore unseen artists to come to the attention of the public. The renaissance had been a healthy beginning. Artists of all media left Harlem—some returned to the South, others went to the Midwest. They organized art centers where large populations of black people lived. Prominent black colleges and universities such as Atlanta, Fisk and Howard founded art departments and added major curricula in the visual and performing arts to already existing programs of liberal studies. Some of these institutions invited writers, painters, sculptors and musicians to serve on their campuses as artists-in-residence. James Weldon Johnson became the first artist-in-residence at Fisk University in the 1920s, a tradition which has continued until now. He was succeeded by Aaron Douglas who organized the Department of Art at Fisk in 1931. Charles White became the first artist-in-residence at Howard University, and a few years later, Hale Woodruff, then professor of art at Atlanta University, organized the "Atlanta University Annual Exhibition of Works by Negro Artists." Like the Harmon Foundation exhibits of the 1920s and 1930s, the annual exhibitions at Atlanta University did more to foster black creative talent in the visual arts than all the previous efforts combined.

Many artists whose works matured during the period of social ferment now associated with the WPA and post-World War II emerged from the rank and file

showing themselves to be artists of great skill and creativity.

These artists remained productive beyond post-World War II and many are still creating works that reflect subjects rooted in the "Black Experience." They have inspired younger artists to reflect upon and work within boundaries that show the history and heritage of their African past.

While many of America's black artists have created visual forms that draw upon black American and African themes, some have not felt the need to reflect recognizably racially motivated themes. As early as 1938, after the force of the Negro Renaissance in Harlem had subsided, artists such as Lois Jones, Palmer Hayden and Aaron Douglas, all having played a leading role in the development of the esthetics of the renaissance, took to the streets of Paris and other European environments in search of personal "relevant" subjects.

Contemporary black artists travel less to obtain subject matter than they do to see the historic places written about in older artists' diaries. However, some have chosen to live in Great Britain, as Norma Morgan does, making periodic trips to the United States. Sam Middleton is looked upon as one of Holland's leading contemporary artists after having lived there for more than 15 years. Walter Williams lives in Copenhagen, where he has continued to interpret the more romantic childhood days of black ghetto dwellers in the United States. He, too, is looked upon by Danish critics as one of Denmark's leading contemporary artists.

There are, however, many contemporary black artists whose works have not been visually affected by those designs that are common to the development of what is called a black esthetic. Artists such as Sam Gilliam, Alma Thomas, Richard Hunt, Adrianne Hoard and William T. Williams have created work that is sensitive to current forms of expression seen among artists of the majority culture. Some writers have referred to these artists as "Mainstream," though it is misleading and at best a temporal classification. The Mainstream label has been erroneously based on the assumption that those artists whose works are closer in subject and style to European-American artists represent a cadre of black avant-garde experimentalists forever in pursuit of the material changing order. It would be more relevant to see the physical origins of these artists' working environments before labeling them so permanently. Sam Gilliam talks openly of the influence that African textiles, particularly batiks and tie-dyed materials, have had on the handsome watery surfaces that characterized his work in the early years of this decade. Other artists believe in the importance of having visual contact with materials outside one's culture for stimulation.

The ethnic influences that are evident in the art of William H. Johnson (p. 90; see also SMITHSONIAN, November 1971), William Artis, Jacob Lawrence (opposite), Romare Bearden and Charles White have left important lasting impressions on the art of many of the young black artists whose imagery is tied directly to neo-African symbols. Outstanding among those who best represent the tradition of the ethnic symbolists are Ben Jones, Keith Morrison, John Scott, Earl Hooks, Raymond Saunders, Nelson Stevens, Betty Sayre, Vincent Smith, Floyd Coleman and Claude Lockhart Clark.

These artists have cultivated an attitude, perhaps indeed an idea, within their forms which the general public associates with being black. It is not a foolproof idea. But it does relate to the notion that black artists are basically visual imagists whose expressiveness relates more to their own experiences and social conditions than it does to a search for new approaches to technique. The most successful black painters and sculptors working today have taken to modified versions of "the image of Man," the black man, as subject matter. The styles of expression that are common to the definition of such an esthetic are not easily defined. The common tie, however, among black artists remains the human urge to be creative while satisfying the will to form. That this form of creativity is influenced by social conditions and environmental phenomena is only human, since the black artist is echoing the time and space of his world.

"Two Centuries of Black American Art" shows the development of a humanistic trend. It indicates the directions that black artists will follow in years to come.

Tombstones. Jacob Lawrence was able to fuse form and life to show black experience in America.

Whitney Museum of American Art

Young trapeze artists of the Nation of Boys practice among the pine boughs at Benposta.

Circo de los Muchachos travels worldwide and helps keep the nation's treasury healthy.

Text and photographs by Tor Eigeland

Spain's Nation of Boys is out to conquer world

Armed with a smash-hit international circus and potent preaching by a small priest, these muchachos *aim to achieve excellence*

Circus camel (the "hunchbacked horse") goes for a leisurely stroll through Benposta.

One day a Galician peasant woman, a pail balanced on her head, stopped dead in her tracks. *"Santo feo!"* (ugly saint), she exclaimed. Through her cornfield loped a strange animal followed by two long-haired, slightly raggedy boys. The woman screamed, furious, "Get that hunchbacked horse the hell out of my field!"

The two boys turned the hunchbacked horse around and, shouting apologies, vanished. They did not stop to tell the angry woman that the horse was really a retired circus camel, and that they and the camel all lived in nearby Benposta, the Nation of Boys. Nor did they have a chance to tell her that the last time the camel disappeared it was found in the red-light district of the sizable city of Orense. Armed *Guardias Civiles*, Spain's tough paramilitary police, had chased it down the street.

Benposta, the Nation of Boys, seems an outrageous presence in bucolic, conservative Galicia, which is the northwesternmost region of Spain. It is a nation of spirit rather than geography. Its citizens are children; its driving force an undersized, unconventional priest. Its philosophy mixes religious asceticism and economic reform. Benposta hopes to conquer the world with love and a circus made up of child performers. It is a benevolent children's crusade aimed at producing a new kind of world citizen and a better world. The movement is 20 years old and is becoming an international one.

The circus—*Circo de los Muchachos*—and other child-operated businesses provide financial support for the Nation of Boys which exists with the approval of the Spanish government.

For the traveler, the first sign of the *Nación de los Muchachos* is a big gas station about three miles out of Orense on the Madrid highway. There, red-shirted boys work the gas pumps. Though some of the boys are very small, all are cheerful and efficient. Some 200 yards past the gas station you turn left off the highway. Between pine trees, up a slight incline, you reach a barrier and a sign—"Customs and Immigration." Unless the uniformed boy on duty knows you, he will ask your business. If you're strictly a tourist, you will be issued a visa.

On my first brief visit to Benposta on a freezing cold December day I had met José María Sanchez Bustos, the acting mayor—then 17—who was also in charge of public relations. Bustos, a cheerful Madrileño, had given me a quick tour of Benposta's closed shops, workshops, bank and government buildings. He outlined briefly schedules for the Benposta boys. "Normally there are classes in the mornings, and in the

Tor Eigeland's article and photographs on Spain's wildlife marshes appeared in SMITHSONIAN, *August 1973. Norwegian-born, he lives near Barcelona.*

One of the younger boys molds clay in class at Aréa, a resort on Atlantic coast where boys spend summers.

afternoons the boys train for the circus or work at a chosen craft or profession."

That particular day, teachers in the schools had gone on strike against the boys, and the boys against the teachers. Two teachers were said to be too authoritarian. But boy citizens of Benposta are left to solve such problems themselves.

During that brief visit I noticed that these Benposteños appeared to be in fine physical shape. This was partly because of their circus training and partly because of fairly tough living conditions.

In the Orense municipal gymnasium, where both local and Benposta boys work out, I observed the two groups. I heard a town boy shout: "Let's get out of here; the Indians are coming!" The Indians were the Benposta crew storming in. Their taut bodies made the town boys look flabby. A Benposta boy commented wryly, "They know us by our paint"—apparently a slightly animal look enhanced by longish hair and a refreshingly disheveled appearance. The *muchachos* come from all kinds of backgrounds. Some are runaways, some homeless, some from intact families. All

Boys from Benposta use the local gymnasium at neighboring Orense to practice their acts.

This Aréa youngster already has the "Indian" look—wild and cocky. Girls also live at the camp.

President of Benposta, José Manuel Louzao, was elected for two years, with second term allowed.

project an air of independence, even cockiness. And not one of them is fat.

I did not particularly enjoy my first visit to the Nation of Boys, perhaps because it was so cold at that time of year. The unpainted concrete buildings scattered among the piney hills seemed stark and rather grim. Only the center of town offered cheer—a few houses and signboards brightly painted, the chapel modern and pleasing. Yet I was fascinated by the place and wondered how it functioned. Why did children from all over Spain, and other nations as well, come to this cold place in the hills?

On the first night of my second visit to Benposta, I found the young citizens and visitors flooding into the chapel for the regular, nightly Mass. I joined them.

Standing by the altar, his arms around the shoulders of two little acolytes dressed in dirty jeans, was a small, wiry, curly-haired man. He wore a black turtleneck shirt and a black leather jacket. A wide belt sporting a huge buckle held up hip-hugging, flared black pants. Big, dark, horn-rimmed glasses dominated the man's swarthy, sharp-featured face.

This was Father Jesús Silva speaking in a hoarse whisper to an attentive congregation. As he talked, Father Silva felt need of his arms, and the two acolytes stood aside. Gradually, as he grew more and more intense, Father Silva's voice rose to a near-screaming crescendo and his hands slashed through the air. Again his voice dropped to a hush before reaching another peak of hoarseness. His words came straight from the gut. He spoke of love, of this lousy world which lets people starve to death when there was no need to. He jabbed away at the evils of capitalism and imperialism.

As the Mass neared its end, a guitar softly accompanied Father Silva's words. He obviously knew something about showmanship. Finally the congregation formed a big circle, joined hands and sang before embracing one another. Then Father Silva, as a true father would, stayed on, for several boys, some very young, wanted to speak with him privately.

Outside the church tall, serious José Manuel Louzao, Benposta president, invited me to his office and educated me on the basics of Benposta's government. "The president, as all public officials, is freely elected," he said. "His term is for two years and he can be reelected once. Under him are ministers of education, public order, hygiene and health, civic activities, supply, industry, finance and recreation. They are all responsible for running Benposta."

I learned that it is divided into districts or cities—each with a mayor. Counting the Benpostas which have been established in Brussels and Colombia—and which operate independently—the movement has more

than a thousand young citizens around the world.

Father Silva told me how in 1956 as a young priest he had started with a group of boys in his mother's house. Developing a circus for the movement's support was natural for him, for his grandfather was founder of Europe's famous Feijoo Circus.

As a circus chaplain he noticed that children usually had to travel with their parents and thus could not attend normal schools. "So then I thought of creating a circus school—one for future circus kids here in Benposta, as well as the one that now travels with our circus when it is on the road."

Father Silva spoke of the circus as "a world in which you make things happen that, if you did not know how they were done, you would think to be miracles." He called the circus a "messenger of joy. Children immediately come around, men turn into children, the sick forget their illness. The circus is a universal show, without borders."

In almost all countries where the Benposta circus performs, television, radio and the press are at the disposal of the child performers. "We are recognized all over the world for our real quality," Father Silva said. "It is not charity. We have one of the three greater shows existing in the world right now. And ours is done by kids. It is our open window to the world."

I asked him to explain to me the Benposta message. He described it as "a universal juvenile movement which has as its main goal to make the whole world, on all levels, aware of the importance of the child, not as an object of charity, but as the most important person in the world. The child has a *right* to a home, food, clothing and schooling. We want to produce a new citizen who in turn can produce a new world."

Warming to his subject Father Silva spoke of constructing "juvenile communities all over the world—communities that can be small models of an ideal society, as an experiment." Such a society, he said, would be ruled by the basic principles of justice, peace, comprehension, recognition of human rights. "We tell a boy that he must prepare himself to become useful in his society, not to enrich himself. We hope that these kids later won't be boxed into our present consumer society."

The Benposta circus had just returned from a successful tour of the United States, Mexico, Colombia and Japan. More traveling was in store—first, Australia, then probably Brazil, Puerto Rico and through Central America.

Some of these countries Father Silva sees as sites for other Benpostas. "To begin with," he said, "we are going to do something in the Philippines. Then we want to work throughout South America—one community in every nation. Our Benposta in Colombia will serve as a starting point."

The priest spoke of the qualities of youth: "a critical spirit, sincerity, capacity for dreaming, hope, a sense of rebellion and purity that grownups sometimes try to smother. I have always thought that values such as these would be a firm base for the building of a different society."

Father Silva sees Benposta as a total substitute for the traditional family structure: "The family unfortunately is not the place to educate the men of the future." He believes that in juvenile communities, children whose minds are still open and unspoiled could be educated for society and that through these communities parents "would make their children citizens of the world as well as engineers or doctors."

Boys get salaries for schoolwork

Benposta boys learn something about economy by receiving salaries for going to classes or for work. "We believe that the boy, practically from his infancy, is as capable of a feeling of responsibility as a grown man. You might find that a boy of 12 has more ideals, more hopes, and thinks more about his community than his parents. Yes, we pay the boy because he has the right to the means of eating, sleeping and gaining an education. We do not want a form of economic protection whereby the poor child, in order to eat, in order to live, has to thank someone who has given him all this money."

Salaries and other Benposta expenses come from the circus, the circus school and the University of the Circus, all of which are now self-supporting. The gas station, a ceramics shop, mechanical workshops and a souvenir shop also produce income. Father Silva talked about a hotel which will also be a hotel school "whenever we find the five million pesetas [about $95,000] we need to complete it."

Father Silva warms to his work as acolytes shiver in the winter chill of the chapel.

On their way to Mass, *Benposteños* congregate outside the modern chapel they built themselves.

Red-shirted, hard-muscled *muchachos* man the gas pumps on the highway outside Benposta.

"We accept money and gifts," he told me, "but we do not solicit them nor will we publicize the gifts by plaques or anything else. The result, of course, is that we don't receive any big surprises in envelopes." He said that the Spanish government gives a "small, insignificant subsidy for our school, which is a recognized educational institution."

Girls, though there are few, are part of Benposta, and "will be integrated into our whole society."

Our interview was ending and I asked, "Do you think Benposta could survive your death?"

He answered in a soft voice, "Yes, yes, I think so." Then more loudly, "Yes, I think so. This is not a person. It is a movement."

As our talk ended, a young boy burst into the room with some message for Father Silva. As he shot out again, he grinned at both of us. I had observed that quick, funny grin all over Benposta. It never failed to cheer me. I also found another quality, a sense of purpose and direction. I wondered if it could emanate from San Pedro de Rocas, the proving ground of a demanding experience that the Benposta boys call "The Great Adventure."

Benposta kids call the place "Rocas." It's about half an hour's drive into the hills to what was a big, natural cave. In the second or third century hermits living in surrounding caves began to gather there to pray. They entered through a tunnel they had dug from above. Succeeding generations of Christians dug a cloister out of the solid mother mountain. They then built on the outside as well, finally creating a church. A fire in the late 1920s caused the church to be abandoned.

Louzao, the president, took me to Rocas with a group of visitors. Here the most serious-minded Benposta citizens start "The Great Adventure," a yearlong ordeal of strict discipline, study, austerity, prayers, trials and adventures. The purpose, in the words of

Benposta's baker is a pro from Orense, but the boys help him to turn out 600 loaves a day.

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Louzao, is "to discover self, others and to find God." He said that you learn to become more profound, to know yourself and then to project yourself into the world to help transform it.

Groups of 10 to 12 boys—there will be girls in the near future—spend the first three or four months of the adventure in a monklike existence at Rocas. Living quarters are dominated by a huge fireplace which is needed to battle the freezing temperatures of night and early morning. Some cots and blankets, sooty pots and pans, bread, onions, candles, oil, a few dishes and books—these are the only furnishings.

The day starts at about 6:30 A.M. when the boys run naked from the waist up to a natural, icy spring for their morning wash. Sometimes they must crack ice to get at the water. Their days are spent in silence except for sports and recreation periods when they may talk. Their time is taken up with prayer, work, meatless meals and classes.

For those who survive Rocas other trials are in store. One is a pilgrimage of poverty. Boys travel on foot, walking 300 or 400 kilometers in 15 days, carrying only ragged clothes, a Bible, a toothbrush, soap, a pen and paper. They beg for their meals, but may not accept money. For those who complete the pilgrimage, Father Silva arranges special work—perhaps in a hospital or a jail, at sea with fishermen or in an asylum.

Out of the hundreds who have started on the Great Adventure, only 17 are full-fledged adventurers. Bustos, who showed me around Benposta on my first visit, has almost completed the adventure and most likely will finish it. He told me about the work he and his companions did in a Gypsy quarter in a Madrid slum. As soon as they had swept out the house where they were going to live, a group of Gypsies threw them out. "They didn't want any strangers around," Bustos explained. Finally a Gypsy family Father Silva knew from his circus days rented the boys a small, unfurnished house. There they set up classes for the Gypsies. Whole families came. "We taught them reading and writing and tried to live like them, to use the same language and sing their songs with them. But everything was so dirty!"

To support themselves, the Benposta boys became Gypsy junk dealers, buying and selling in Madrid streets, just as the Gypsies did. Bustos said, "We'd shout '*chatarrero*' [junk dealer]. We bought junk and sold it by weight. People thought we really were Gypsies and often treated us with contempt. We used a pushcart because we couldn't afford a donkey."

The boys learned Gypsy tricks like putting rocks in kettles to make them weigh more. "Gypsies are very comfortable about morals," Bustos explained. "If you hire a Gypsy to put up an electric cable for the city, you will find that all of a sudden his whole tribe has free electricity hooked up to the city system."

Bustos told me about his pilgrimage of poverty, when he and his companions ended up in the hands of the police. "I crossed Galicia with two other guys—one black guy from Guinea and one Spaniard from Murcia. We took off without money or identification papers. I even wore torn trousers." The boys begged for their food, and Bustos observed, "The funny thing was that the poorest were the ones who gave the most. The rich shouted, 'Lazy son-of-a-bitch! Go and get yourself a job!'

"We went to some very remote villages where nobody had seen a black man. They were all horrified. Everybody was out in the road saying, 'Look, a Negro! What a horror!' In one village some were so scared they called the *Guardia Civil.* As we were walking along the road that night, suddenly a floodlight hit us and someone shouted, 'Hands up!' There they were, the cops—submachine guns pointed at us and all. They thought we were hippies and expected to find drugs. They found only some Bibles and toothbrushes. One asked me, 'What are you going to do?' I said, 'I'm going to be a priest.' Bop! They belted me. They beat the daylights out of us. We finally managed to call Father Silva and he got us out."

Once again there was that small priest in the black leather jacket who looms so tall over Benposta. His slogans about imperialism and capitalism can't mean much to the Benposta children living in their small, isolated world. But the *muchachos* know the meaning of love and honesty, and they have sparkling eyes. And that makes them rich.

In bright costumes and under the lights, tumblers of the touring circus build a pyramid in Japan.

A group of tiger cubs peers through grasses in India's Kanha Reserve, one of nine which have been set aside for the failing king of the jungle as part of internationally supported conservation program.

By S. Dillon Ripley

Ecologist returns to South Asia for another look

As human populations burgeon and natural diversity diminishes, the only chance for the likes of tigers is in a few zoolike refuges

My favorite time is just before sunrise. Standing on a bluff overlooking the pools of a drying riverbed, with the mist rising and the faint light barely outlining the spidery tips of the highest branches of the trees, there is little real sense of definition for the eyes; the ears serve us best. The owls are still calling—the insistent "who-whoo" of the horned owl, the "WO, Wo, wo-wo-wo," like a Ping-Pong ball dropping, of the dusky horned owl, or the chattering, chirring, mad little call of the spotted owlet. All this is mixed with a cacophony of peacock calls, the cackle of jungle fowl sounding remarkably like far-off bantam chickens in a barnyard, and now and then the high, bell-like "pow" of a spotted deer or the husky "gr-oow" of a barking deer.

This scene could be somewhere in India or Bangladesh, or parts of Burma, or in the foothills of Nepal. I have a few favorite places, mostly in India, or currently in Nepal, because I search for special birds with my Indian friends, and particularly Sálim Ali, the dean of bird watchers. Off and on for 30 years now, and while working on our multivolume *Handbook of the Birds of India and Pakistan*, we have stood in such dawns looking out over the mist toward the first light and hearing the voices of the night.

In these years since World War II the whole vast subcontinent of India and its neighboring countries have been convulsed with revolutionary political changes. In the same period, these nations have experienced staggering population increases, a growth that is exponential, not arithmetic, and that continually outweighs the benefits of increased food production and economic development. Viewed even in our own limited time scale, and recorded during our quest for birds, the complex interdependence of animals and plants has changed continually, subtly and at an accelerating pace.

It is true that change is a constant in nature: nothing stays the same. But it is true also that these things catch up on you: forestry, for example. Decades ago no one would have thought that forestry practices set in motion to create the vast plantations of teak and sal which cover much of the Indian Peninsula could have a long-term effect on animal life. But when we visit an area such as central India after 25 years, it is soon apparent that the so-called "miscellaneous forest" has virtually disappeared. A few scattered clumps may border drying stream beds, too steep or inaccessible to be harvested. Everywhere else are neat rows of the teak, sal and rubber, what we call monocultures, symbol of efficiency but lacking in many of the lowest animals of the food chain, grubs which feed on the litter of certain plants now missing. As these species drop out of the chain, other, larger ones such as birds and small mammals become more rare. In nature, diversity is the spice of life. The loss of natural diversity is the result of vast human population growth, felling and burning forests, greatly increased agriculture, related hydroelectric projects, the heavy use of pesticides and all the other aftereffects of burgeoning human occupation.

The express train of humanity

What can we do about it? Very little, I think. The effects of this complex web of changes now set in motion are still so little documented and the pressure for maintenance of human life is (of necessity) so great, that there is no getting off the train. It is an express now, going faster and faster, relentlessly gaining momentum in the night, its destination totally unknown. Will the planet succumb, and in the process all human life and culture deteriorate to an unrecognizable level? Perhaps. What those of us interested in conservation are virtually sure of is that many of the species of plants and animals, finely tuned to their surroundings, especially in the tropics, will vanish from the scene long before we have managed to create ways to stabilize the juggernaut of humanity.

Some of the most dramatic changes in the world are occurring in south Asia. They are largely unmonitored and proceed with an apparent slowness. But such changes become cumulative and produce small "crashes," like the roof of a house falling in because of the stealthy work of termites.

Photographs by Jehangir Gazdar

Secretary Ripley watches as wife, Mary, takes turn at spotting scope in Keoladeo Ghana Sanctuary in India. Mr. Ripley is the author of 11 books, including the *Land and Wildlife of Tropical Asia*, for which this article provides a timely update.

Three hundred years ago, in north-central India, heavy forest ringed the capital city of Delhi. The Mogul emperors of the time hunted wild animals such as the rhinoceros, bison, buffalo, tiger *and* lion, the latter presumably in open savanna country, as well as endless sorts of smaller game from deer and antelope to game birds like the great Indian bustard. Today without irrigation it would be impossible to grow large trees in that countryside. Not only have the emperors' animals vanished from the latitude of Delhi, but lands are arid; rainfall is obviously reduced. Deserts have advanced to within 200 miles of the city.

Such changes occur gradually so that individuals hardly notice, and debate will linger on among foresters and economic geologists as to the degree of importance of their occurrence. But naturalists can often tell, for their marker species are more varied, more indicative of the real state of nature.

What are some of the marker species? The tiger for one, the epitome of the jungle lore made familiar to all of us by Rudyard Kipling's tales. No approximate estimate of the number of tigers in India existed until recently, though the number shot annually in big game hunts by Indian rulers and their guests, as well as by well-to-do sportsmen, indicated that there were a great many, that this was a highly renewable resource and that their breeding rate exceeded any annual cropping. A World War I estimate, cited by the late E. P. Gee, one of India's authoritative wildlife experts, gave 40,000 for the Peninsula. By the end of World War II the estimate was down to 30,000. Formerly tigers had occurred in a range from Anatolia in the west to Siberia, China and Korea in the east, and south through the Southeast Asian nations to the islands of Sumatra, Java and Bali. By 1947, the bell had begun to toll the death knell for the tiger's reign as lord of the jungle. With crop production the priority of the new republics of India and East Pakistan, crop-production guns were issued on demand to every farmer. Tigers could be shot at by thousands of people who had never before possessed effective weapons. Often the weapons were loaded with crude makeshift bullets, and muzzle-loaders were used, charged with rusty nails. The result was vast numbers of wounded tigers that eventually succumbed to blood poisoning. Poaching and the poisoning of carcasses of tiger prey added to the toll.

In 1968 at a meeting in Bombay I hazarded a prediction that less than 4,000 tigers were left in all of India and East Pakistan (now Bangladesh), and that the species would be extinct in the wild in 25 years. The following year at a meeting of the International Union for the Conservation of Nature in New Delhi,

A small herd of Barasingh does and their young, potential tiger prey, warily roam grasslands.

a resolution was passed calling on India and other governments to ban the killing of tigers, and the trade in tiger pelts for women's fur coats (surely a mindless and wholly useless form of dressing, for tiger-skin coats are as inefficient and unesthetic as anything the most whimsical and impractical couturier could think of—but expensive; $7,000 was the last figure I can recall, an inflated symbol of man's cupidity and stupidity).

There was an immediate response to this publicity by the central government of India, whose Prime Minister Indira Gandhi has for many years had an abiding interest in nature and wildlife. By late 1970 tiger shooting was banned throughout India, although reports of poaching and the export of skins through the ports continued to appear. By 1972, however, the reports had declined markedly and continue to decline up to the present. The Indian government formulated a specific plan to save the tiger, a species symbolic, in its continued existence, of a whole environmental mosaic of nature conservation problems. "Project Tiger," adopted in 1973, will run until the end of March 1979. It consists essentially of setting aside nine tiger reserves in different areas in India, from Rajasthan in the northwest to Assam in the east and to Karnataka (formerly Mysore) in the south. These nine reserves consist of a core area roughly ranging in size from 155 square kilometers to more than 300 square kilometers (58-112 square miles), each within a larger reserved forest area as a buffer zone. In the core areas, cattle and villagers are to be excluded and no timbering allowed. The villages in the neighboring reserves are sometimes to be moved, and gates placed on roads running to the core areas to exclude traffic.

In the spring of 1972, the first attempt to make a nationwide census of tigers in India—using essentially the system of checking for pugmarks, which are reasonably different between male and female, and young and old tigers—produced a total figure of 1,827 animals. This year a similar census is being attempted, but so far no firm figures have emerged. A German expert, Professor Paul Leyhausen, has estimated that these core areas could hold from 23 to 45 tigers each on the basis of a single tiger requiring a home range of perhaps seven to eight square kilometers. It might be said that the reserves could hold a total of between 300 and 400 tigers altogether.

Mr. K. S. Sankhala, in charge of Project Tiger, estimates that as of the winter of 1976 there are 2,000 tigers left in India; the species, then, may be on the increase. But it is not exactly clear where the 1,600 to 1,700 animals presumably not in the core areas exist at present, or how that figure has been arrived at. For the fact, of course, is that tigers are not compressible in the wild. They are mostly solitary, adult males associating with females 18 months or older only for the short week or two of the breeding season, and females keeping their cubs, except for an occasional tolerated female cub, only up to 18 months to two years. After

Indian rhinoceros (and baby), once down to 600 animals, is up to 900 , but crowded into a few refuges.

With the grace of a ballerina, gray heron slows for
a landing among roosting egrets as other bird leaves.

such a period the animals live largely alone, and must feed on a reasonable supply of prey species, mostly barking deer, hog deer, chital and wild boar. Thus the amount of prey species is a principal factor in the survival of the tiger. Prey species are subject to predation by man as well as disease transmitted by cattle. They may be rapidly driven out of an area by man-set fires. Occasionally, tigers following moving prey will fight and kill each other.

If there are somewhere between 1,800 and 2,000 tigers in India, how many are there in the neighboring countries? Last winter we visited Nepal where, in the lowlands adjacent to India, the government has established several national parks. In one, Chitwan, an area of some 384 square kilometers (144 square miles), the Nepal Ministry of Forests has established a tiger study area in conjunction with the World Wildlife Fund (which also supports Project Tiger in India), along with the Smithsonian Institution. In Nepal the effort is being made to census tigers and their home ranges by means of radio telemetry. This project has managed to identify and follow seven tigers over a period of three years in nearly one-third the park area. In contrast to Professor Leyhausen's optimistic estimate of the carrying capacity of a protected area of forest in India, namely one tiger per seven to eight square kilometers, years of study in Nepal show that an adult male tiger needs more than 50 square kilometers of home range, and that no more than three to five females might coexist in such a space, depending of course on food supply.

One telling piece of evidence that has emerged from the study area has been the amount of stress a tigress experiences in feeding cubs. Recently, an animal with three well-grown cubs was tranquilized with a narcotic in order to be collared, only to have her die literally in the arms of the research group. On examination, the explanation of the emaciated tigress became apparent when it was found that one rear leg was gangrenous from an old wound and that a forelimb had broken bones. Either the stress of hunting for three big cubs had provoked her to fight with a large potential prey animal, or she had been wounded fighting off a male tiger. In either case, the mother

An emerald with ruby eyes, the small green bee-eater is a part of Asia's diminishing natural diversity.

Common and fairly widespread, the spoonbill makes a living from the rich ooze of marshes.

tiger's task had been greater than she could cope with.

It is possible that there are approximately 200 tigers left in Nepal, although no accurate census exists. Tigers exist in Bhutan to the east, perhaps 50 or more, while the rough and largely untraveled mountains of the India-Burma-China-Vietnam border may contain another 75. It is unlikely that more than 150 survive in all the rest of the range of the species, south to Java. Thus a guess of 475 tigers outside India and Bangladesh places an especial responsibility on those countries which may contain three to four times the number found in the rest of the world. Captive tigers, some 1,111 in number, can hardly provide a pool for restocking in the wild, for they cannot be effectively taught to hunt and survive in nature. Thus I shall be interested to see if my prediction of 1968 comes to pass before the end of this century.

Another marker species is the great Indian rhinoceros, which I first studied 27 years ago with Sálim Ali at the request of the government of the state of Assam in 1949. This past winter we visited a sanctuary area on the Rapti River in Nepal where, with protection, rhinos have become common again after years of hunting and occasional poaching. One of the sadnesses of the interrelation between man and rhinoceros is that the projecting bonelike horn (actually an epidermal structure related physiologically to hair) has been construed since time immemorial as a phallic emblem and has commanded ever higher prices in the market of pseudomedicine. The horn, powdered and swallowed or rubbed on the male organ, is said to be a potent aphrodisiac. Traditions like this, "all in the mind," die about as easily as the ones about spilling salt on the table or walking under a stepladder or knocking on wood for good luck. But in the process it has nearly managed to exterminate several species of rhinoceros. For to take the horn means killing the animal. The huge Indian rhinoceros, whose adult weight may reach one-and-a-half tons, is now confined to low-lying swampy land along the Brahmaputra River in Assam, to a small area in West Bengal at the foot of the Himalayas, and to the Terai lowland of west central Nepal along the Rapti and Narayani Rivers. When Sálim Ali and I made our census in 1949, we

A frieze of painted storks is reflected in the still waters of an Indian marsh, a quiet, peaceful scene that belies the pending threat to many of Asia's wild species that now hold on only in a few refuges.

doubted if there were more than 600 of these huge grazing creatures in existence, a low number compared to the thousands that must once have spread hundreds of years ago along the river systems of Pakistan and lowlands of India and Bangladesh to Burma.

With protection and park systems, by stringently pursuing, arresting and sometimes shooting poachers, and thanks to the provision of Jeeps by international conservation organizations, the great Indian rhinoceros has been saved. Its population has increased by 50 percent. This presents the inevitable problem of the future. How can the rhinoceros be preserved within some ill-defined limit of numbers that equates with the available parklands? How compressible is the population? More so than the tiger, but how many acres of grazing land per animal is tolerable? Indian rhinos are solitary, mostly staying by themselves, coming together only to breed and for the cow to care for her young (usually a single calf) for a year or so.

In one area of Nepal this past winter, we found ourselves in a veritable traffic jam of rhinos on a sward of short grass along a stream. Someone remarked that there ought to be "stop and go" lights, as our elephants took us smoothly along the bank, and one dark rhino back after another appeared from the patches of taller grass. Then each of the great beasts would lift its heavy head, snort and trot away. In one case, a rhino bellowed and charged.

Being charged by a rhinoceros is exciting. The rhino does not use its symbolic horn, but rather bites with its powerful tusks, and elephants are afraid of having their tender trunks slashed. My wife's elephant, however, a female and thus tuskless, doubled up her trunk and charged right back. It was a moment of truth. The rhino swerved, hesitated and then turned and ran. Hurrah!

Another marker species is the Asian lion, now confined to the Gir Forest in Gujarat, north of Bombay, where about 175 individuals represent the entire species' dwindling remnant (SMITHSONIAN, July 1973). Short of transporting some to another habitat (which I have suggested elsewhere), the present scheme of surrounding the whole Gir Forest with a wall to exclude domestic animals and grazers seems a sensible

temporary effort to produce what is in effect a large zoo enclosure.

This may well be a presentiment for the future: patches of the original environment of southern Asia, suitably fenced to protect the animals from humans as in a vast zoo. So the Addo elephant has lingered on in South Africa. So the Ceylon or the Indian elephant may eventually survive at all, except in the most inaccessible hill ranges, where agriculture, timber cutting or road building may be impossible. But are there any such places? Wild elephants are now limited to a very few places in Sri Lanka, southwest India in Kerala and Karnataka, a patch here or there in Orissa and Bengal, Nepal, Bhutan (clinging on only) and Assam and Arunachal Pradesh, east to northern Burma, southwest China (rediscovered in Yunnan after a hundred years), and parts of Thailand, Malaysia, Vietnam and Cambodia. In all these areas, the chances for the species depend purely on the rate of development. No doubt individuals will eventually survive only in some form of enclosed national parks or large zoolike patches of preserved environment.

Most of the rest of the larger mammals of tropical Asia find their fates linked with those of the large cats, the rhinos or the elephant. Some of the species of apes are affected by an active trade in export of monkeys for medical research. Several species of macaques, for example, have become scarce in their ranges in open semijungle country. Bears are now rare in the lowlands, as are the wild oxen and the bison. The giant forest ox of the Thailand-Cambodia border country may be extinct. For all large, noticeable, edible or dangerous mammals, the end of free ranging in the wild is in sight. Much the same can be said of the very largest birds, the great Indian bustard, large eagles, storks, pheasants, geese and ducks.

Paradise for water birds

My favorite sanctuary for birds in all the world is the Keoladeo Ghana in Bharatpur in northwest India in Rajasthan, not far from Agra. Here in some 17 square kilometers (6 square miles) of impounded water, with dikes to separate vast shallow ponds full of marsh grass, pond weeds and plankton, there is a veritable paradise for water birds. Storks, cormorants, purple coots, herons, egrets, a whole Noah's Ark of large wading birds of tropical Asia nest here, often on projecting dead trees rising out of the water. In winter scores of thousands of geese, ducks and shorebirds come down from the mountains and steppes of central Asia, along with the Siberian crane, large as our whooping crane, and nearly as rare as well (77 is the greatest number seen at Bharatpur); the rest of the East Siberian breeding population must migrate to an area somewhere in southern China as yet unknown.

Siberian cranes, photographed by Mrs. Ripley, migrate over the Himalayas to northern India and Pakistan.

In the old days before the republic, the Maharajah of Bharatpur had fabled duck shoots on his property. Today the area is a state sanctuary, a tribute to the persistence of Sálim Ali. We went out together early one morning this past January. The mist hung thick over the water, veiling from our eyes the hordes of birds resting, wading, perching or flying everywhere. But we could hear them, the hoarse "oink" of the graylag, the high fluting nasal horn of the barhead, the quacks and whistles of ducks so many of which I recognize now after all the years, wigeon, pintail, shoveller, pochards and teal of three species.

With the light clearer above the mist, we could see the flying shapes of herons, egrets and storks, and here and there the somber silhouette of a spotted or imperial eagle. There was a sudden rushing sound, and straight over us as we stood spellbound on the dike flew four white Siberian cranes, their melodic soft calls echoing round us. This was the time of all times to be out of doors in tropical Asia, the first moments before sunup when life seems real, people are at a distance and once again poor, tarnished nature reigns supreme. Then, if ever, is a moment for hope, that somehow the good old world will right itself, and that real values will be preserved. But for how long, oh Lord, how long?

Standing four and a half feet tall, Siberian cranes display red faces during their mating dance.

The Colonel's portrait hangs in Stevens Institute of Technology, founded by a son.

Rachel Stevens, married to John in 1782, is radiant in copy of a 1794 Gilbert Stuart.

By Keith Wheeler

Genius in steam, John Stevens, and his 'scratches'

Dreams of a vast transportation network led this landowner to study steam and try to link the new United States with it

Rachel Cox Stevens was not particularly surprised to be awakened one cool dawn in the spring of 1825 by a peculiar scratching in the region of her shoulder blades. As was her wont, she had been sleeping in the airy bedroom of the villa high on Castle Point in Hoboken, across the Hudson from Manhattan, with her back to her husband.

Seeing that she stirred, Colonel John Stevens addressed her: "Do you know what figure I am making?"

"Yes, Mister Stevens." It was always *Mister,* even after 43 years and 11 children. "The figure of a fool."

"No," he said, in no way offended. "I am calculating an eccentric and connecting rod on the new engine for the steam carriage."

Rachel Stevens had long become resigned to the knowledge that the Colonel, struck by an idea at any hour and lacking pencil and paper, would work out his engineering equations on her shoulder blades. She knew that the Colonel, impatient with 15 years of mulish skepticism on the part of New Jersey, New York and Pennsylvania politicians and other men of substance who refused to believe that a steam engine on wheels could haul wagons on tracks, was planning to build a steam carriage to demonstrate their error. She also knew that more than likely he would finish the thing and that, moreover, it would work. If it did, it would be the first steam carriage in America, although there were steam locomotives in regular service in England. (The public still had four years to wait for Robert Stephenson's modern, sophisticated locomo-

Stevens' steam carriage, first in America, circled a meadow on the Colonel's Hoboken estate in 1826, and showed skeptics that railways were more than a wild-eyed dream.

tive, *Rocket,* to make its triumphal debut on the Liverpool and Manchester line.)

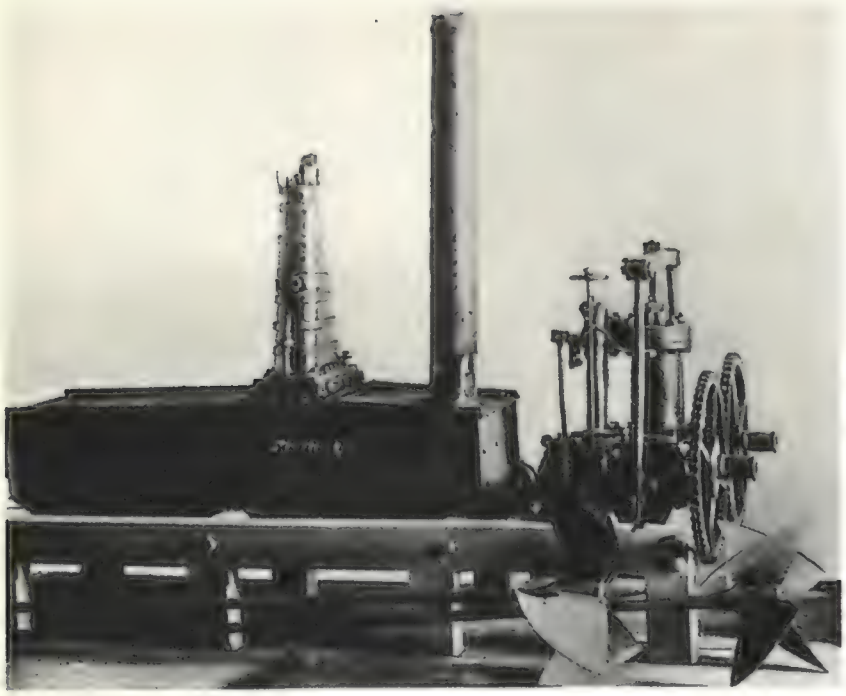
The brain engaged that early morning in plotting the education—and discomfiture—of a host of prestigious doubters belonged to one of the most gifted, versatile and durable Americans of his or any era. He was 76. But Rachel had recently written to a son: "It is really surprising that Your Papa at his age should be so very active; as much so as ten years ago. . . ."

Born in New York in 1749, John Stevens had served as treasurer of New Jersey during the Revolutionary War and had made friends with a number of national leaders. In 1784, anxious to rescue his family from the fetid, garbage-rancid streets of New York, the Colonel acquired the 564-acre "island of Hoboken"—which really was an island in those days, cut off by creek and tide marsh from the mainland. He managed to buy the whole shebang at auction for £18,340 sterling.

Until now, Colonel John Stevens' life had been developing along predictable lines, for he came of gentlemen landholding forebears. But two circumstances conspired to set him on a radical new course: James Watt had developed a comparatively efficient steam engine—thus a new age of energy was dawning; and Colonel John, surprisingly, had been endowed with a brain full of scientific curiosity. He knew utterly nothing of engineering; his schooling had been restricted to the gentleman's pursuits of the law, war and government. But between his fiefs of Hoboken and Manhattan ran three-quarters of a mile of Hudson River. The Colonel still had a town house at No. 7 Broadway, as well as business and political interests in New York, and the idea of waiting his turn on a "pitty-auger"—the slow, cranky sailboats that plied uncertain courses between shores—chafed him. He bought his own ferry business to be sure of a ride. And he set to brooding on the manifest importance of efficient transportation if America was ever to become prosperous.

On a visit to Trenton in 1787 he glimpsed the future.

Free-lancer Keith Wheeler wrote about aircraft models in the November 1973 SMITHSONIAN.



Stevens' first marine steam engine, built in 1804, now belongs to Smithsonian.

Little Juliana, designed to run on Colonel's steam engine, was reconstructed in 1844 (above).

On the Delaware river a man named John Fitch was testing a steamboat. It was intended to suck water through a pump in the bottom and expel it out the stern, a primitive forerunner of jet propulsion.

He learned that another experimenter, James Rumsey, was trying to reduce boiler dimensions with a coil of copper tubing running through a firebox in order to increase the water surface exposed to heat. He wrote to Rumsey, a complete stranger, suggesting "improvements" in the boiler and offering the opinion that if the engine could manipulate oars "a velocity of perhaps 15 or 20 miles an hour might be acquired."

He began sending off to England for any existing literature on steam, and Rachel confessed, rather shamefacedly, that the works of James Watt had replaced the Bible as the Colonel's "bed candle" reading.

Until now, the Colonel had no hardware to back his ruminations. Still, he was offended when the New York legislature granted Rumsey an "exclusive" right to build steamboats. It seemed manifest to Stevens that only Congress could dispense such privileges under its Constitutional mandate calling for the encouragement "of Science and the useful Arts," so he appealed to powerful friends in the federal government. In April 1790, the first U.S. patent law was passed. Thomas Jefferson, as Secretary of State, became a commissioner to rule on patents, and insisted on detailed descriptions of proposed inventions. To him, the Colonel submitted descriptions of two machines. One envisioned a piston sliding inside a cylinder, into the opposite ends of which—in an alternating cycle—water or oil would be propelled by steam pressure to push first against one, then the other face of the piston. "By this means the piston is driven backwards and forwards," the Colonel theorized.

A dismaying lack of skilled labor

The second specification proposed "A Boiler, being a collection of tubes placed vertically and opening at each end into a vessel containing steam and water." Thus the ex-soldier country squire, drawing upon a tiny fund of book knowledge, devised improvements for both the steam engine and the multitubular boiler. His patents were granted in August 1791.

The Colonel discovered to his dismay that the American labor force at the end of the 18th century included almost no mechanics who knew much more about metal working than he did. He hired John Hall and suggested, lacking other materials, that the piston might feasibly be made of cork and that the cogwheels to actuate the valves be carved of hardwood. Hall didn't last long: the Colonel caught him swigging the grog supply and fired him as "a confirmed sot."

The Colonel was not much disturbed to learn that

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the closest tolerance to which the most skilled machinists could shape an iron casting was "the thickness of a worn shilling"; after all, who knew any better? He was, however, taken aback to discover that it took weeks for two workmen to rough out the interior of an iron cylinder, working day and night with a muscle-powered "hook bar" turning device. Then there was the question of money. Although technically rich in land, the Colonel was perennially short of hard cash. And a family that grew almost yearly magnified the problem.

In the late 1790s, Stevens entered into a partnership with his brother-in-law, Chancellor Livingston, and Nicholas Roosevelt to promote steam navigation on the Hudson. The main fruit of this union was two decades of running controversy between the Colonel and his sister's husband. Before any workable boat materialized, Livingston went off as minister to France and there met Robert Fulton. He became so entranced with Fulton's steamboat experiments on the Seine that he entered into a conflicting partnership with *him*. From the day that Fulton paddle-wheeled up the Hudson in his English-engined *Clermont* in 1807, Livingston schemed, maneuvered, threatened suit and manipulated to rule his brother-in-law's boats off the Hudson river. The fight lasted until Livingston's death in 1813, and was not finally resolved until 1824, when Chief Justice John Marshall ruled that no state could grant a monopoly of navigation on an American river.

The long battle effectively obscured the

Model shows T-rail with flange, invented by Robert L. Stevens and still in use.

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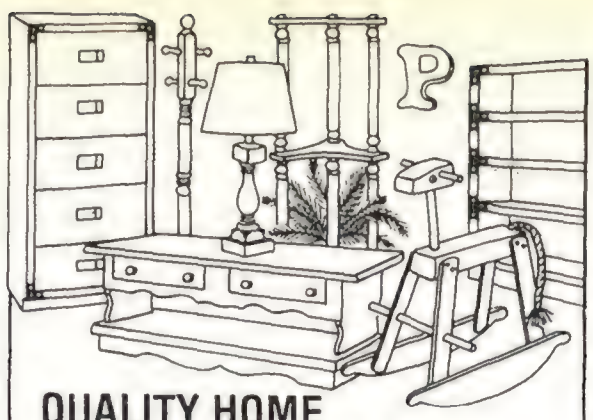

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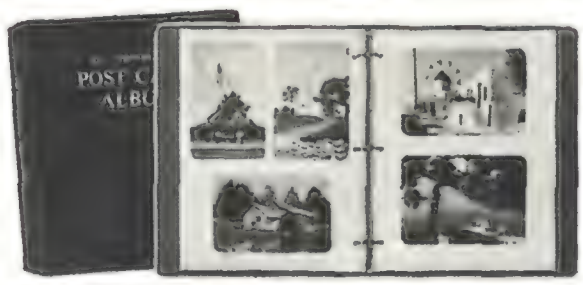

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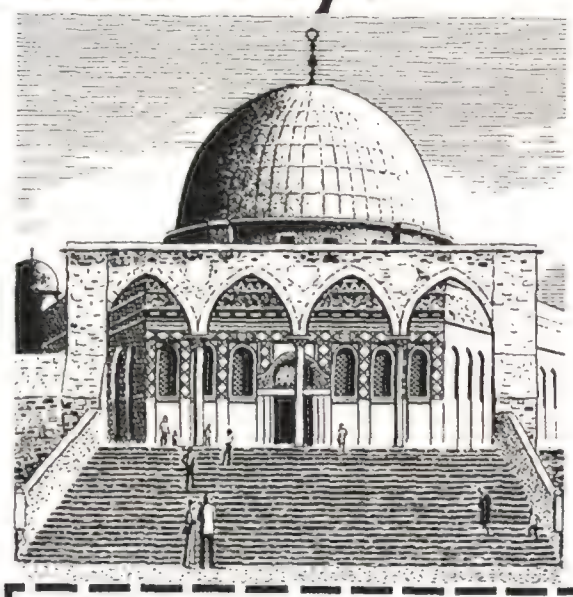

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Colonel Stevens' design for multitubular boiler, shown here in a wooden model.

truth that Colonel John had had at least one cumbersome but working paddle-wheel steamboat on the Hudson in 1798—nine years before Fulton's *Clermont*.

In 1804, the Colonel launched *Little Juliana*, a 20-odd-footer whose radical "rotatory" engine was an idea which fascinated him—and others—but which proved to be an impractical form of steam propulsion. And the boat was driven by slow-turning, twin screw propellers. Stevens sadly abandoned her after her boiler exploded. Philosophical about failures, the Colonel concluded that steam was not yet up to driving a propeller.

Then, in 1806, anticipating a regular service between New York and Albany, he planned his most ambitious project, *Phoenix*—100 feet on the keel, with a 16-foot beam—to be powered by an improved reciprocating engine, driving paddle wheels. He thought she ought to be able to do around ten miles an hour but was willing to settle for six.

Phoenix was launched at Hoboken in April 1808, perpetuating that long confrontation between the Colonel, his brother-in-law and a jealous Robert Fulton. Chancellor Livingston had persuaded the legislature to grant him and Fulton exclusive right to steam navigation on the Hudson. Confident that *Phoenix* could show *Clermont* her wake, Stevens offered to operate under license from the monopoly. Fulton said no. Stevens swore he would operate anyhow. Fulton and Livingston retorted that they would seize his boat as a trespasser under New York law.

Concluding at length that it was futile

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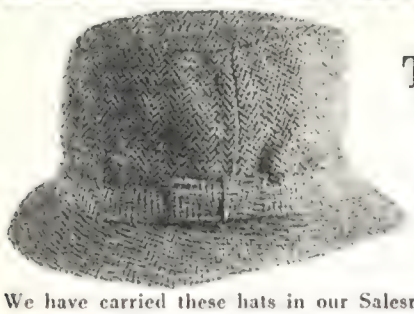

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"New York from Weehawk, 1834" shows Hoboken as two spits jutting into Hudson

to buck Livingston's stranglehold on New York legislators, Colonel Stevens and his son Robert took the paddle wheeler out past Sandy Hook and into the open Atlantic. Thirteen days later, having survived a gale off Barnegat and weathered Cape May, *Phoenix* moored at the Market Street wharf in Philadelphia.

The Colonel's plan now was to improve travel between New York and Philadelphia, the country's two most important cities, by putting *Phoenix* into regular service on the Delaware River between Philadelphia and Trenton. She was such a grand success that shortly afterward Chancellor Livingston's brother John inaugurated steamboat service at the other end from New York to New Brunswick on the Raritan River. Travel time and comfort were immensely improved. But wayfarers still confronted a gap of 25 miles over brutal highways.

These execrable roads inevitably led the Colonel to thoughts of a railroad. He prophesied that "a small steam engine, of ten inches diameter, worked with steam the elastic power of which was 50 pounds to the circular inch, would possess a power equal to five thousand pounds on the whole area of the piston, moving with a velocity of three feet in a second. This would exceed the power of twenty horses who could . . . transport one hundred and sixty tons."

For 16 years he got nowhere. Detractors argued that any steam engine he could

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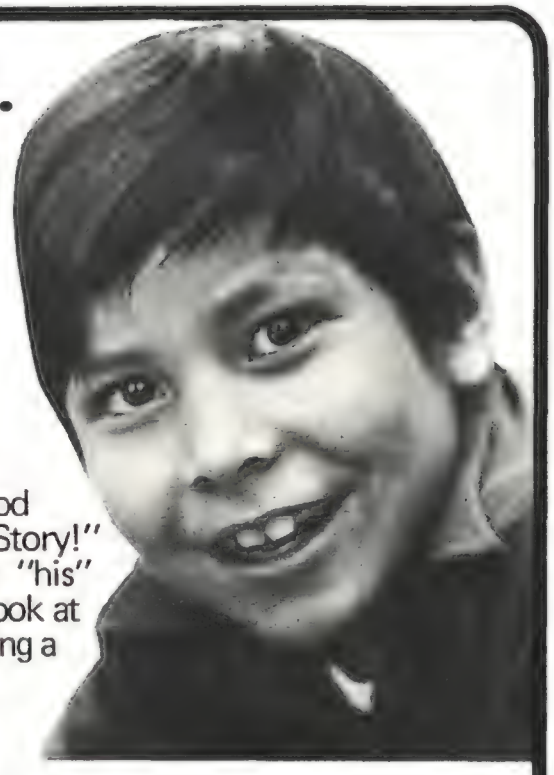

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River at right. This print now hangs in the Stevens Institute of Technology.

build would be too heavy for any feasible track, that no locomotive could climb a hill, that even if it could there would be no way to stop the behemoth "without heavy shock," that locomotives proceeding in opposite directions would always be running into one another, that any such apparition would stampede cattle. Moreover, the nation was preoccupied by the War of 1812 and, simultaneously, by an enthusiasm for digging canals.

In vain the Colonel bombarded Governor DeWitt Clinton of New York and Gouverneur Morris, chairman of the Erie Canal Commission, with facts and figures to demonstrate that a steam railroad could be built for a quarter the cost of the big ditch, that it would haul freight and people in all seasons and be immeasurably faster. He appealed to Thomas Jefferson, but the squire of Monticello, only six years older than the Colonel, begged off, saying "There is . . . a term when age should know itself, withdraw from observation, and leave to the next generation the management of its own concerns."

The Colonel pressed on. Cheerfully forecasting rail speeds up to 100 miles an hour—or at least "as fast as a pigeon can fly"—he lobbied in Richmond for a steam-powered water-and-rail link from the headwaters of the Roanoke river to Petersburg. Virginia officials listened but took no action. At the age of 65, Stevens personally scouted a line from New

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Brunswick to Trenton, finishing with a restorative shot of "whiskey and cider, $1" at the Steamboat Hotel.

After his relentless prodding for some legal recognition of rails, the New Jersey legislature created a company to "erect a Rail-Road from the River Delaware to the River Raritan." But the Colonel's elation faded as the act languished.

Still, as the years rolled on, Colonel Stevens refused either to age visibly or to surrender. In 1820, pressing the Pennsylvania legislature for action, he foresaw that "diverging from the centre, like rays of the sun, railroads will diffuse light, heat and animation to every extremity of the Commonwealth. . . ." Again in 1823, now 74 but going strong, he declared: "The wealth and prosperity of a nation may be said to depend, almost entirely, upon the facility and cheapness with which transportation is effected internally. . . . Were a railroad between . . . the Ohio and Potomac [to] be carried into effect it would become the greatest thoroughfare in the known world. . . ."

Then, gradually, the climate changed. England was experimenting with railroads and even Governor Clinton, that diehard canal enthusiast, was watching British progress.

Stevens went home to Hoboken and commissioned the laying of a circular track on the lawns at Castle Point. On May 13, 1826, the Colonel's steam carriage was towed up from the shop and hoisted astride the rails. Its boiler, built on the principle of multiple tubes, was fired up, and with a minimum of huff and puff the contraption got under way, carrying a half-dozen beaver-hatted dignitaries in a dizzying circle at about six miles an hour. It was an awkward-looking machine: four wooden-spoked wagon-wheels, the smoking boiler taller than a man, its water supply in a wine cask, its motive power delivered through a massive gear meshing with a cogged third

Stevens' *Phoenix* was first steamer to run open seas, Hoboken to Philadelphia, in 1809, helping Colonel to dodge confrontation with Fulton on Hudson.

rail between the tracks. It weighed less than a ton but it was indisputably a steam carriage, the first of its kind in America.

The Colonel lived to see the first operating steam railway in New Jersey, the Camden & Amboy Railroad. It began to function in 1833 with two of his sons as its chief operating officers, driving an imported English locomotive running on the first flange T-rails in the world. Stevens' son Robert had invented this modification of the T-rail; it is still used in this country. And Stevens lived to see the Pennsylvania legislature appropriate $2 million to construct a canal-railway system. Having developed with his sons Robert L., Edwin Augustus, and John Cox two other inventions, the iron-clad warship and the cylindrical artillery shell, the Colonel was entitled to approach the end in proud peace.

In 1838 he died at 89. No man ever did more with a long life. Moreover, he needed every day of it.

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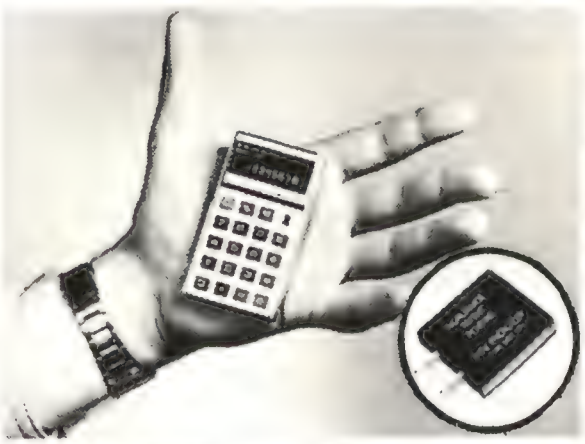

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By Dolly Connelly

Bloomers and blouses plus waving alpenstocks

Through a Northwest club, the Mazamas, ladies took up macho mountaineering and stormed the glaciers of the Cascades

In the early afternoon of July 19, 1894, the last of 193 roped stalwarts struggled to the extreme summit of Mount Hood, Oregon. At 11,245 feet, the exalted climbers—including 38 women—joined hands and recited a vow:

"Where solitude holds forgotten wilds, where mountains rear carven heads against skies of purest ether, where lakes like gems adorn the bosom of Mother Nature, where no human feet have trod —there Mazamas love to go."

The name chosen for the pioneer climbing club, first to accept women on equal standing with male mountaineers, derived from the Aztec Indian name for "deer." Early membership requirements were simple: "Any person who has climbed to the summit of a snow peak on which there is at least one living glacier, and the top of which cannot be reached by any other means than on foot."

The Chinook motto the group selected, *"Nesika Klatawa Sahale"* ("We Go Up"), summed up their primary purpose—to explore the glaciated mountains of the Pacific Northwest.

The Mazamas made high history. Though a climbing club had been organized as early as 1857 in England, few women had ever dared glacial heights until the lady Mazamas jauntily waved their alpenstocks from the crests of the Cascade Range. Individual women made famous climbs—Annie Peck on the Matterhorn in 1895, Mrs. William Hunter Workman in the Himalayas in 1899, Dora Keen Handy on Mount Blackburn, Alaska, in 1912. But there was no group to compare to the bravely bloomered belles of the Pacific Northwest.

They blackened their faces against snow glare and stormed Oregon's Mount Hood, Mount Jefferson and the Three Sisters; Washington's Mount Adams, 14,470-foot Mount Rainier, Mount Saint Helens, Mount Sahale and Mount Olympus; California's Mount Shasta. One peak after another felt the beat of their boots, the probe of their long alpenstocks. By the summer of 1906, trail-hardened Mazamas were ready for the most brilliant and difficult climb of their early history, that of the precipitous ice wall of the shadowed northeast face of 10,778-foot Mount Baker close to the Canadian border in Washington state. They were told that it was impossible to make the ascent from the northeast, that no one could reach timberline, so impenetrable were forest jungles.

"*Nesika Klatawa Sahale*!" replied the Mazamas. They began their journey "upward from civilization to those untrod wilds, an odd mingling of royal progress and the savage realism of tramp life."

A frontier railroad to the newborn logging and mining settlement, Glacier, deposited 71 men, 47 women and a vast pile of dunnage and foodstuffs, including 200 dozen eggs, 20 miles below the chosen campsite. "Social amenities took flight" as the mile-long procession straggled to base camp far into the night. In the morning the dauntless climbers found themselves "restored to a state of sublime tranquility and joyous strength" by the marvelous beauty surrounding

Women outnumber men on training climb near crest of Coleman Peak.

Minus rope, crampons or ice axes, they assaulted this precipitous slope.

them. They soon found a way up the steep cliff that bears their name, Mazama Dome, and made it a playground. Mazamas slid fearlessly down its thousand-foot snowfield in tin wash basins with cedar poles for rudders.

Two fine photographers, Seattle's late Asahel Curtis and Bellingham's late Charles Finley Easton, strapped to their backs heavy glass-plate cameras and photographed decorously bloomered, pneumatic-bloused gentlewomen frolicking in a domain previously considered sternly masculine. The pictures marked a new era in sports participation for women.

At the turn of the 20th century, ladies had begun making a timid entry into sports. Trouserettes, "joined to the gaiter, avoiding hint of stockinged limb," had appeared for female bicyclers. More daring ankle-length skirts caught the masculine eye on golf course and roller-skating rink. In wretchedly uncomfortable garb, ladies indulged in languid lawn tennis and croquet matches held to a sedate pace lest the participants dissolve in vapors. But *mountaineering!* It seemed beyond the pale. And many of these enthusiasts were school teachers!

"Strict military discipline" was maintained during training climbs. Serious studies of flora and glacial movement were made. Mazamas put out a minor forest fire and hustled black bears away from the cook tent. They made the first maps of the nine major glaciers of Mount Baker. Club President C. H. Sholes wrote:

Glaciers are winding
Crushing and grinding
Hurling their tribute
From dome to the sea.

Bert Kincaid, a reporter for the old Bellingham daily, the *Puget Sound American,* split crude alpenstocks from a fallen Alaska cedar by the light of the campfire. Meanwhile, "divers kinds of merriment" filled the nights with fun.

Roped together but lacking the essentials of modern mountaineering (crampons, ice axes), the climbers, including women, crossed gleaming Mazama Glacier, topped a steep ridge separating it from Roosevelt Glacier, named for Mazama honorary member Theodore Roosevelt because of its unending racket, and waited chilling hours until a surveying

Formerly an ardent climber herself, the author free-lances from home on Washington's Olympic Peninsula.

Fun in camp was a vital part of Mazama mountaineering. These ladies rest up with a vigorous tug-of-war during a club climb of Mount Rainier in 1909.

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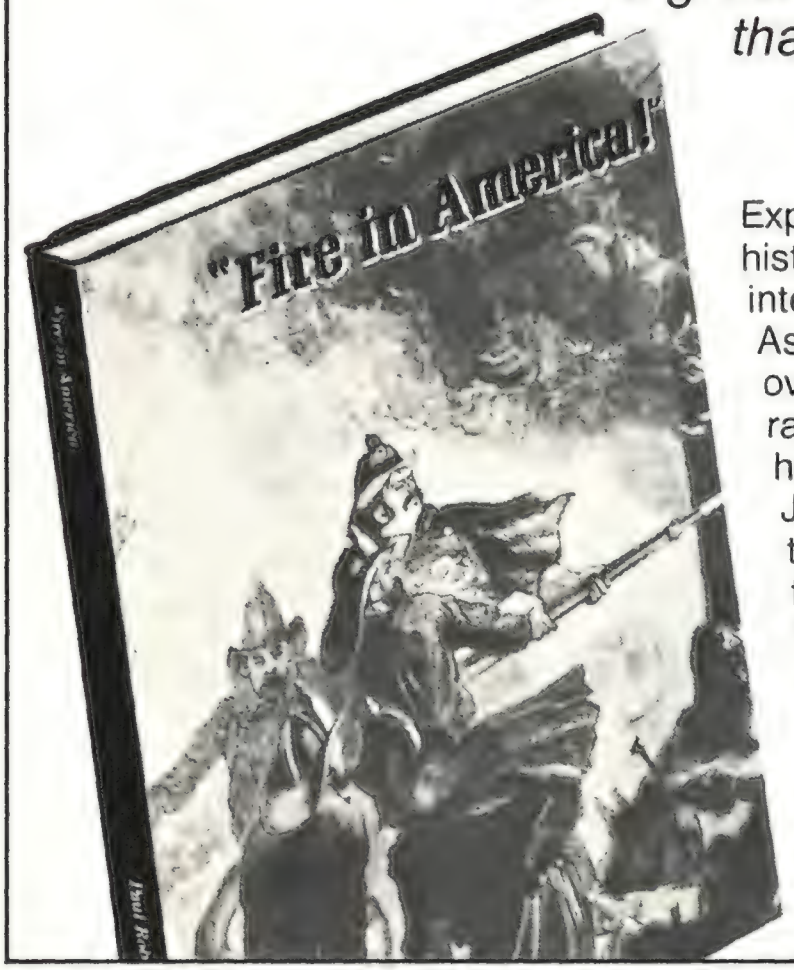

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party reported that the 65- to 70-degree cliff barred all but trained alpinists.

The group returned late to high camp at the base of Coleman Pinnacle, "puzzled—but not defeated." In the small hours of that night, two secret expeditions set out for the summit. Rodney L. Glisan and John A. Lee were in for four days of heroics before they reached the peak by the roundabout south-side route and were caught on it by darkness, spending "several centuries" waiting for sunup. The other team, a select party of men who became known as the Six Immortals, headed straight up Mazama Glacier, traveling in a treacherous crevasse, tunneling through a cliff of snow and cutting steps in the ice with a camp ax. They achieved the summit in 18 hours by a route that is still only rarely attempted.

Asahel Curtis and W. Montelius Price promptly made the first recorded climb of Mount Shuksan, east of Baker. Six years later, Monty's wife, Anna Howard Price, became the first woman to climb Mount Shuksan, "meek and humble in the presence of those stupendous walls."

Daily journals of early Mazama expeditions indicate little of the machismo drive of current mountaineering. Instead, it was important that a smoking stovepipe was extended with empty coffee tins, that somebody left the salt behind in Glacier, that a laden packhorse sank into a hidden crevasse on Sholes Glacier and was lifted out with considerable hilarity. They named Hann Lake in the Galena Chain for Mrs. R. D. Hann, a Wellesley graduate who bathed, nude, among its ice chunks every morning. They chuckled over the sight of camp on cold mornings with everyone rolled up in blankets in every stitch of clothing—even picture hats and boots.

In the fall of 1906, Seattle Mazamas organized The Mountaineers with 110 charter members, nearly one-half of them women, as an auxiliary to the Mazamas of Portland, Oregon. Today's membership tops 3,000. The two great climbing clubs of the Northwest have continued their brilliant record. Members gather from all over the United States for annual outings and mass climbs. Mountaineering record books are filled with first ascents credited to Mazamas and Mountaineers. And women still make up a third of the roster of their big climbs.

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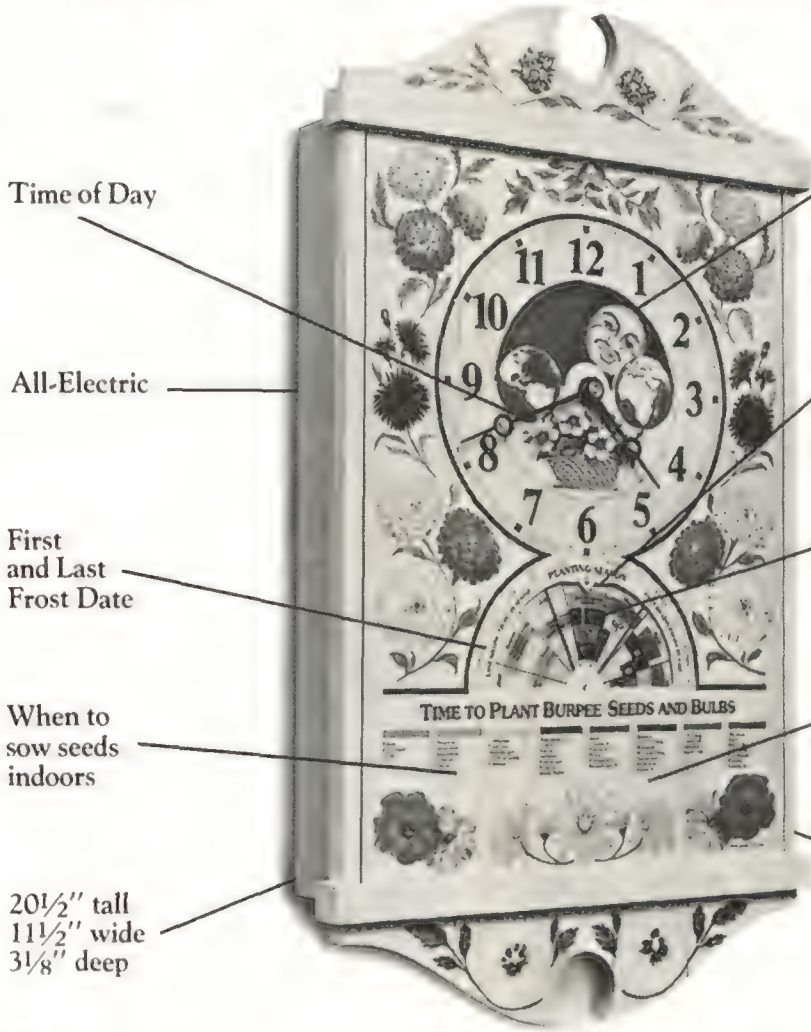
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The Cloister

By Silvio Bedini

Lafayette's stolen watch

After Washington gave this timepiece to his French ally, it disappeared—but a belated confession explained all

October 19, 1781: At Yorktown, Virginia, leaves had barely begun to turn, but the day was chilly as American and French troops lined the road leading from town. Slowly the defeated British and Hessians advanced to the melody of *The World Turned Upside Down,* and as they marched between the two lines, their officers ordered "Eyes right!" This produced a salute to the French regiments and ignored the Americans. But young General Lafayette, stationed in front of his Continental Army division, immediately shouted an order, and a fife and drum corps crashed into life with *Yankee Doodle.* The startled troops spun their heads and so were forced to salute the

Inner case of presentation watch carries inscription (left). Mr. Bedini, Deputy Director of Smithsonian's Museum of History and Technology, is writing a book on "adventures in time" for New York publisher Harry N. Abrams. It will expand this account in fuller detail.

Americans. The surrender ceremony was perhaps the young Frenchman's most triumphant moment.

Tradition claims that after the Yorktown capitulation, Washington presented gifts to General Rochambeau and Admiral de Grasse, and probably at this time gave a gold watch to Lafayette. Soon after, Washington and Lafayette departed from Yorktown, the latter returning to France.

In 1824-25 the aging Lafayette visited the United States; according to legend, he carried with him the timepiece from Washington. He exhibited it to friendly American crowds as a symbol of their personal friendship and the link between the United States and France. He was repeatedly warned about pickpockets. It is said that one soldier who came to greet him put his hand on the watch, but, overwhelmed with delight at being received so warmly by his former commander, let go to seize Lafayette's hands.

Many events were scheduled for Lafayette's reception in Nashville. The governor invited all Revolutionary War officers and soldiers in the state to join in. It is believed that during the festivities the watch was stolen. The theft did not come to public notice until almost 50 years later. Around 1870 a Texan, John R. Ward, visiting Louisville, attended a public auction sale of the property of a

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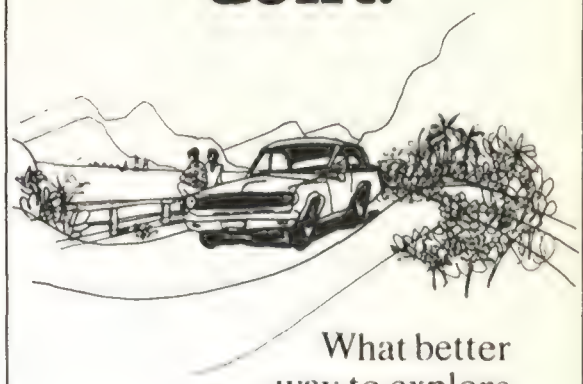

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Ward tried and failed to contact the Lafayette family, and consigned the watch to be sold. Meanwhile the story spread to Congress, and several members became interested. So, in January 1874, Ward turned the watch over to Senator Charles Sumner of Massachusetts. On October 21 John L. Cadwalader, Acting Secretary of State, forwarded it to Minister Elihu B. Washburne in Paris for restoration to the family.

In June 1874 news of the discovery had led an anonymous Washington investigator to trace what happened to the watch. His findings were reported in the New York *World*. He described how he managed to obtain temporary possession of the watch from the State Department: "I at last found the venerable jewel in my hands. Venerable indeed! It had rested in G.W.'s fob, over his epigastrium, in those sulphur-colored breeches, with all his beloved seals dangling below it. It had

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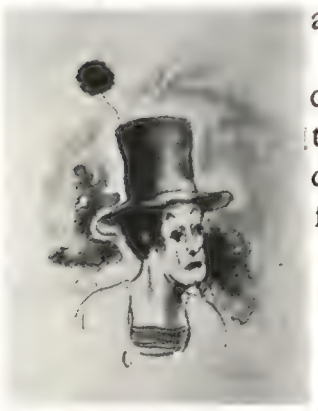

Tina Mackler's original lithograph, "Marcel Marceau-'Bip' ", limited edition of 90.

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A few pointers, then, about original prints:

Original prints, whatever the process used to create them, are "hand-pulled" under the artist's supervision, or by the artist himself. This means that any work produced photographically or by another purely mechanical process is not an original print.

Has the work been "hand-pulled"?

If you examine a print under a magnifying glass and discover a regular pattern of small dots, you will know immediately that it is not an original work.

If the print is a serigraph (produced by a silk-screen process), the ink will seem rather like paint and appear to be sitting upon (rather than absorbed into) the paper.

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Wayne Cooper's original lithograph, "Willow Slew", limited edition of 300.

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Joan Miro's original lithograph, "Homage to Helion", limited edition of 99.

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been preserved by Lafayette through all the trials and perils of the French Revolution. Even the jailers of Olmutz had spared it—to be cabbaged at last by a vulgar Nashville thief! But was it taken by any vulgar thief? I was determined to settle the question at once."

The writer went on the trail, armed with the names of the auctioneers who had sold that Memphis pawnbroker's goods. These led him to a second Memphis pawnbroker who finally showed him an entry in an old ledger: "June 18, 1868. —Miss Matilda Garland, of Jackson, Madison County, deposits a watch. . . ." Miss Garland had been married three months earlier to a Paul De Long of Grenada, Mississippi, and had called on the pawnbroker with the intention of redeeming the watch. She was greatly disturbed to learn that it had been sold.

The writer followed Mrs. De Long's trail to Grenada and found the lady to be charming. She told him that her grandfather, the Reverend Rufus Garland, rector of St. Mark's Church in Nashville, had at the time of Lafayette's visit served as one of the 15 members of the guard of honor. She had assumed that the French patriot had presented the watch to her grandfather as a memento of the occasion. She was chagrined to learn that the watch had been stolen and stoutly maintained that her grandfather could not have been the culprit.

The grandfather had died in 1847, she said, leaving as his only property a desk and library of books to his son, her father. The latter was killed in the Civil War and his widow and small daughter were

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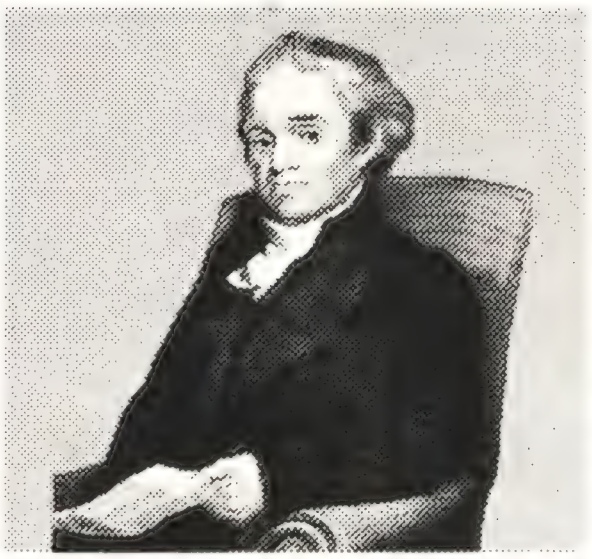

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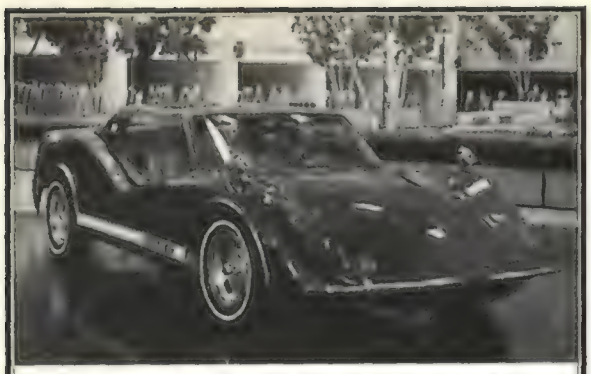

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Lafayette's watch key is below his seal. *CUR NON* means "why not."

left destitute. Little by little they sold the books and then disposed of furniture until in 1868 all that remained were two chairs, one bed, and the minister's desk. As they were approaching starvation, they had to part with the desk.

As Mrs. De Long began to clear out the desk drawers, she activated a spring that revealed a hidden drawer. Therein she found the watch. Instead of selling the desk, they pawned the watch for $35.

The writer asked to examine the secretary-desk and discovered that the secret drawer had concealed a false bottom. Beneath this he found two pieces of paper, one a draft for £150 drawn on a London bank in favor of Rufus Garland. The other was an account of the watch's history, written in Garland's hand and dated at Nashville, December 18, 1846.

"This has been a very sad day to me," he wrote. "This forenoon came to me my old friend and comrade, Benjamin Flurnoy, of Columbia, in great distress of mind, and asked me to lock the doors and hear him make a disgraceful confession. Then he laid before my astonished eyes the long missing watch of Lafayette, the loss of which caused so

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- **Which Presidents were orphans?**
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much excitement. 'I stole it,' he said; 'I stole it, Rufus' and hid his face from me. Presently, when I had comforted him, and he grew more calm, he said: 'The doctor tells me I have not long to live; my heart is diseased. I desire you to make restitution for me. Here is all the money needed—take the accursed wedge of Achan from my sight—it has tortured my whole life—restore it to their heirs—without exposing me. I have had misery enough.' He bowed his white head . . . and wept.

" 'How did this happen, Benjamin?' I asked. Said he: 'That night, you remember, we were all upon guard. You and the rest were asleep, but Spatch, Davis, La Crosse and I were on guard for a spell of two hours. We had all been drinking heavily—poor Spatch and Hyacinthe fell asleep on their post, and the devil was in me. I wanted something that belonged to the Marquis. I stole into his room, past old Pouchon, who was snoring. So tired and worn out the old Marquis looked! I opened the trunk, seeking a ribbon, a handkerchief, or the like. The first thing I saw was the watch, and without thinking, I put it in my pocket, raised the window gently, and crept like a thief as I was from the room. As I crossed the threshhold I heard the old Marquis call out in his sleep: "Arretez vous, Mon-

American Minister to France returns watch to Lafayette's descendants in 1874.

sieur! Noblesse oblige!" Stung to the quick, I turned back to restore the watch, but just then Pouchon roused, and I escaped. I have never known a happy minute since.'

"My poor friend! I could look in his haggard face, and believe him. I told him, however, that I could not consent to deal with this matter in a clandestine way. There need be no publicity about it, but in communicating with the Marquis' heirs I must give his name and circumstances. He groaned and begged me to defer the disclosure until after his death. 'It will not be long,' he said pathetically.

"To this I assented, and so he left. . . . I have drawn this statement up only as a guide for my heirs in case of my death happening before that of Flurnoy's."

So ended the dramatic account of the watch by the New York *World*'s unsigned writer. He had changed all names of individuals and places, making it impossible to confirm his story.

The historic timepiece remained in the Lafayette family for almost a century, then was part of a small collection of Lafayette memorabilia transferred in 1948 to an American relative, from whom it was inherited in 1963 by the present owner. It is now on loan to the National Museum of History and Technology of the Smithsonian Institution.

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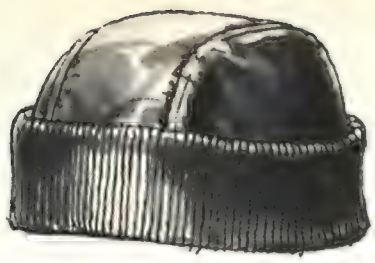

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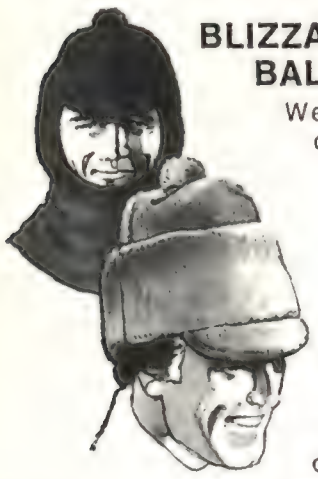

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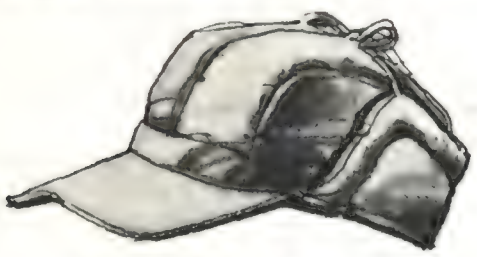

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Book reviews

The Spirit of Fact: The Daguerreotypes of Southworth & Hawes, 1843-1862
Robert A. Sobieszek and Odette M. Appel with research assistance by Charles R. Moore
(David R. Godine & The International Museum of Photography at the George Eastman House, $27.50)

This book is a triumph. It is the first monograph to document the astonishing achievement of the daguerreotypists Southworth & Hawes, and to its scholarly documentation is wed the meticulous, superior standards of its publishers. It is a fitting and exquisite accompaniment to the exhibition of these beautifully accomplished daguerreotypes organized by the museum at Eastman House and presently (through December 19) on view at the National Portrait Gallery.

In this age of the Instamatic and the SX-70, it is well to recall how immense were the technical limitations of the first commercially practicable photographic method. When Daguerre announced his invention to the world in 1839, he probably did not envision its application to portraiture. The prolonged immobility that the daguerreotype required—usually from 15 to 30 minutes—seemed to make it suitable only for static subjects like buildings or still-life groupings. Daguerre, however, had underestimated the possibilities of his process. Soon, fledgling daguerreotypists began training the camera's lens on the human face.

It is within this context that the monograph places the images of Southworth and Hawes.

Their partnership began in1843. Three years before, both had attended François Gouraud's lectures on his teacher Daguerre's invention. In an appendix to the body of the book, the text of a summary of those historic demonstrations, "the first concrete introduction of photography to America," is included. Southworth and Hawes probably did not meet at those lectures, however. For three years after Gouraud's talks, they pursued their photographic careers separately—Southworth in partnership with Joseph Pennell, his former roommate at Phillips Academy in Andover, Massachusetts, and Hawes as an itinerant portrait painter as well as a daguerreotypist.

When the two men joined forces, they meshed very distinct aptitudes for the business and the art of making daguerreotypes. Albert Sands Southworth was the technical genius of the partnership. His passion for experimentation stimulated the retail end of their business—they were granted patents for both a stereoscope camera and viewer—and modified versions of photographic supplies, such as coating boxes, lenses and plates issued from their studio. Josiah Johnson Hawes concerned himself more with the appearance of their daguerreotypes. It is to him that their superb compositions, wide range of poses, eloquent choice of props and dramatic lighting are primarily attributed.

Southworth and Hawes had ample opportunity to employ their talents, for their studio on Tremont Row in Boston drew a steady stream of customers. Daniel Webster, Henry Wadsworth Longfellow, Ralph Waldo Emerson, Horace Mann, Jenny Lind, an East Indian sailor, "Boston Beauties," families, children, people alive and dead—the range of American life in the mid-19th century posed (or were posed) for their camera. The 113 images reproduced in this volume illustrate that their response to their subjects was invariably personal, individualized.

For Lola Montez, the celebrated courtesan, they achieved a vision of tantalizing decadence. Her pose is defiantly casual; her large eyes glow in a face already marked by her many adventures. Her walking gloves, strangely out of place in the studio setting, strike a perverse note, as does the cigarette that dangles from her hand. It was an age when few women had come *that* long a way.

The daguerreotype of Harriet Beecher Stowe is in marked contrast to the portrait of Montez. Homely, delicate, withdrawn, the woman who wrote *Uncle Tom's Cabin*

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and helped ignite a war sits huddled to the left of the picture, while beside her, like an alter ego, sits a fragile plant.

Southworth and Hawes often challenged the rules of 19th-century portraiture. If a basic principle of picture making was that "the eyes should . . . never [be directed] upon the apparatus," then Southworth and Hawes allowed some of their subjects to stare at the camera's mesmeric lens, and thereby achieved images of arresting intensity.

However, it is not simply that Southworth and Hawes disregarded the rubric of daguerreotypy. It is their transformation of these conventions that is even more impressive. A case in point is a picture of an unidentified girl turning to gaze at Gilbert Stuart's portrait of George Washington. Veneration of Washington was a standard part of American iconography in the 19th century, but in the hands of Southworth and Hawes the girl's contemplation of the painting transcends the simple expression of hero worship or patriotic sentimentality. In their daguerreotype, Washington, the federal icon, becomes an object of self-contemplation through which the young girl seems to find her inner self.

This enigmatic, compelling quality extends to the landscapes and genre scenes of Southworth and Hawes. Views of Niagara Falls, the water dissolving into foam,

A Southworth & Hawes medallion daguerreotype. It was the most technically difficult of the styles of the 1850s. From the book.

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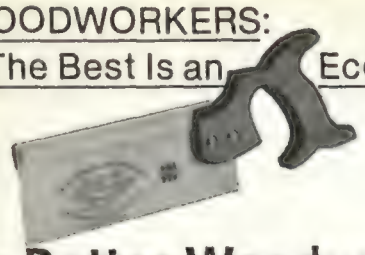

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anticipate the work of landscape photographers like Carleton Watkins and Timothy O'Sullivan. The Southworth and Hawes documentation of a reenactment of the first public operation performed with the aid of etherization predates Eakins' commanding painting *The Gross Clinic,* but vividly shares its stark, powerful vision.

Twelve years after its invention, the daguerreotype began to be superseded by the collodian process (glass negatives for multiple prints). The partnership of Southworth and Hawes was dissolved in 1862, but their images remain, proof that from its birth photography could be art.

—Mary Ann Tighe
Education specialist, Hirshhorn Museum and Sculpture Garden

A Georgian at Princeton
Robert Manson Myers (Editor)
(Harcourt Brace Jovanovich, $12.95)

This book presents a series of authentic letters, vintage 1850-1852, exchanged by the members of a Jones family of Georgia, some of whom become transplanted to Pennsylvania and New Jersey. The letters are, in themselves, astonishingly alive and readable, evoking a sense of immediacy and intimacy.

The correspondents are sensitive and literate and we may follow their reports to each other through three years of intimate correspondence almost as an epistolary novel.

The first letter, dated April 17, 1850—from one Reverend Dr. Charles Colcock Jones to Colonel and Mrs. William Maxwell—describes the scene at the deathbed of an old slave named Jack: "I had all the family called, white and black; and as each one came up, he took them one by one by the hand and charged them in the Lord and commended them to God." The third letter, penned a few days later, tells of a fire which destroyed the Jones' house while the family barely escaped into the night, bearing among other treasures the beloved servant in his coffin.

Not long afterward, Dr. Jones, a plantation owner as well as a minister and a seminary professor, receives an offer to become corresponding secretary of the Presbyterian Board of Domestic Missions based in Philadelphia. So, the reader soon finds himself in the midst of an evolving story and easily becomes involved in the

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fortunes of the Joneses, who do indeed move North.

The two sons, Charles jr. and Joseph, are enrolled at Princeton, their father adjusts to his new job, and their mother fails in her brave attempts to adapt to "this land of strangers." The boys do well at college, although both they and their parents feel homesickness for Georgia.

In the two-year exchange of letters, we learn of academic schedules in which "lecture followed lecture in quick succession." After classes there is "some drunkenness and swearing." Other and more innocent pastimes lead the mother to caution Charles not to play shinny with his watch in his pocket.

One charming aspect of the correspondence is the constant flow of love letters between Dr. Jones and his wife whenever they are apart. Another recurring theme is the parents' concern about the fact that their sons may not have experienced religious conversion and the father asks, "what will . . . the honor of the world avail if you have no religion?" While Charles is a prolific letter writer, his brother Joseph is not represented by one letter written by himself in the entire book. ("Ask Brother why he does not answer my letter.")

By the end of the volume, in 1852, Charles is at the point of graduation and his brother is one year away.

It should be noted that this book, a feast in itself, is closely related to another work. If one has read *The Children of Pride* (1972), wrought by the same editor and many of the same letter writers, *A Georgian at Princeton* may be regarded as a satisfying dessert. If not, it could serve as an appetizer.

The earlier and much larger book (1,845 pages) takes the Jones family through a subsequent 14-year period (1854-1868), thus leaving a two-year gap following the time of the Princeton book which, as we have indicated, presents letters dated from 1850 to 1852. For those whose appetites and curiosity are stimulated by this new book, ample scholarly annotations are available in *The Children of Pride* to put the entire, intricate tapestry into perspective. Besides all of that, a play by Robert Manson Myers, *The Courtship of Mary Jones,*—based on letters between the minister-to-be and his bride-to-be in 1829 and 1830—was presented during the summer of 1976 in Washington, D.C. There is a possibility

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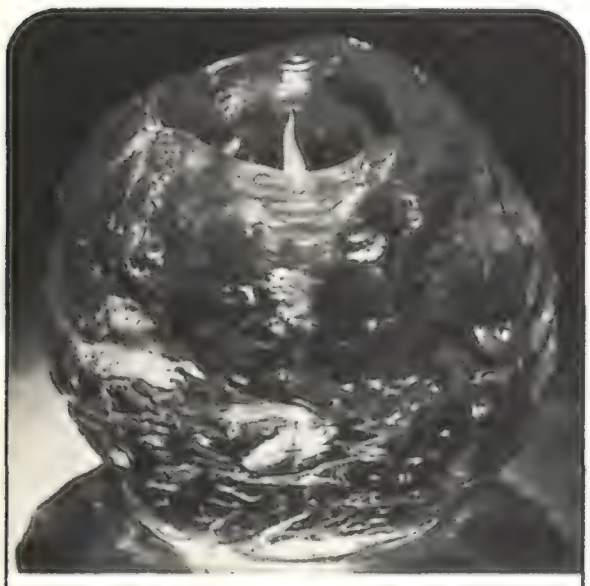

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that the Jones letters also will spawn a television series.

Thus the reader should beware of becoming addicted to the spell of the Joneses from Georgia.

—*Earl B. Braly,* former Professor of English at Texas Tech

The View from Great Gull
Michael Harwood
(Dutton, $8.95)

Terns have somehow been taken for granted, perhaps because they seem always to be there. Yet few creatures are more graceful in the air than these forktailed fliers. One way or another, they enrich and enliven a water area and are especially helpful to fishermen as tipsters on where the fishing is good.

In this readable little book, Michael Harwood makes us aware of both the fascinating life cycle and critical environmental needs of the common tern and of the roseate tern, the most graceful of them all, a species nearly exterminated by the plume hunters in the latter part of the 19th century, and even now seldom seen except when nesting along the coast.

Mr. Harwood, who wrote *View from Hawk Mountain,* was inspired this time by a summer's field study at Great Gull Island, a spot of land in Long Island Sound owned and operated as a wildlife refuge and research station by the American Museum of Natural History in New York. There he served as a member of a volunteer research crew, sharing spartan living and long hours with assorted professional and amateur ornithologists while counting nests, marking eggs, making "chick checks," banding, measuring and weighing birds, and tern farming—weeding beach plants to make more nesting room. It's the kind of humbling learning exercise every writer on natural themes ought to undertake.

Terns may be taken for granted, but the author reveals their historical ups and downs at Great Gull Island and other habitats. These maritime birds make immense flights in migration from as far as the Strait of Magellan to the New England coast. When conditions are favorable they establish huge breeding colonies, but these are apt to be short-lived. Storm tides in a few hours can destroy thousands of eggs and young. A sudden change in conditions at sea may cause complete disappearance of the small fish on which terns

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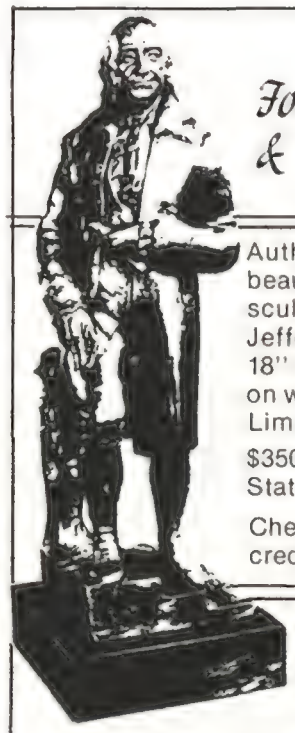

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depend for food for their young, and adults have been observed leaving for other parts while the young starve to death. When parents were helpless to scare off a large nocturnal predator like the great horned owl, they were seen fleeing the breeding grounds at night, despite the presence of chicks and eggs in the nest.

Then there's Man's impact: preemption of habitat; introduction of Norway rats that steal eggs and kill chicks; pollution of coastal waters; drainage of agrichemical wastes; and the population explosion of gulls (thanks to the garbage dumping boom) driving terns off many islands. Great Gull's special handicap for many years was the presence of a coastal artillery station, complete with colossal 16-inch gun that made it look like a medieval castle island. Happily such things do become obsolete, in this case opening the way for the American Museum of Natural History to acquire the island in 1948 and start restoration of the breeding ground.

The author reviews the comeback of the tern. At first there were none, then a few landed, then nesting started in 1955. Now they arrive in spring in great numbers, at the same time as their historic companions, the mackerel. Great Gull is now the the largest known roseate tern colony in the Western Hemisphere.

Mr. Harwood describes the ground-and-sky dancing courtship and spirited defense against intrusion of Great Gull terns; also the personal satisfaction and lasting value of field observation. He questions aloud the validity of tern farming. After all, the plants uprooted will shortly reclaim their territory. Besides, the process increases the colony's productivity, "thus demanding that we clear more of it each year. If we do not, we will have played the terns a dirty trick." It's the same dilemma in wildlife management everywhere: of choosing, if indeed there is a choice, between manipulation within an increasingly artificial environment and protection and restoration of what little natural environment remains.

The View from Great Gull does not quite impart the ecological lesson the author would have liked it to; nevertheless it seems certain that it will win friends for the worthy project on this odd little island and for the nesting birds who have adapted to it.

—Michael Frome

Author, *Battle for the Wilderness.*

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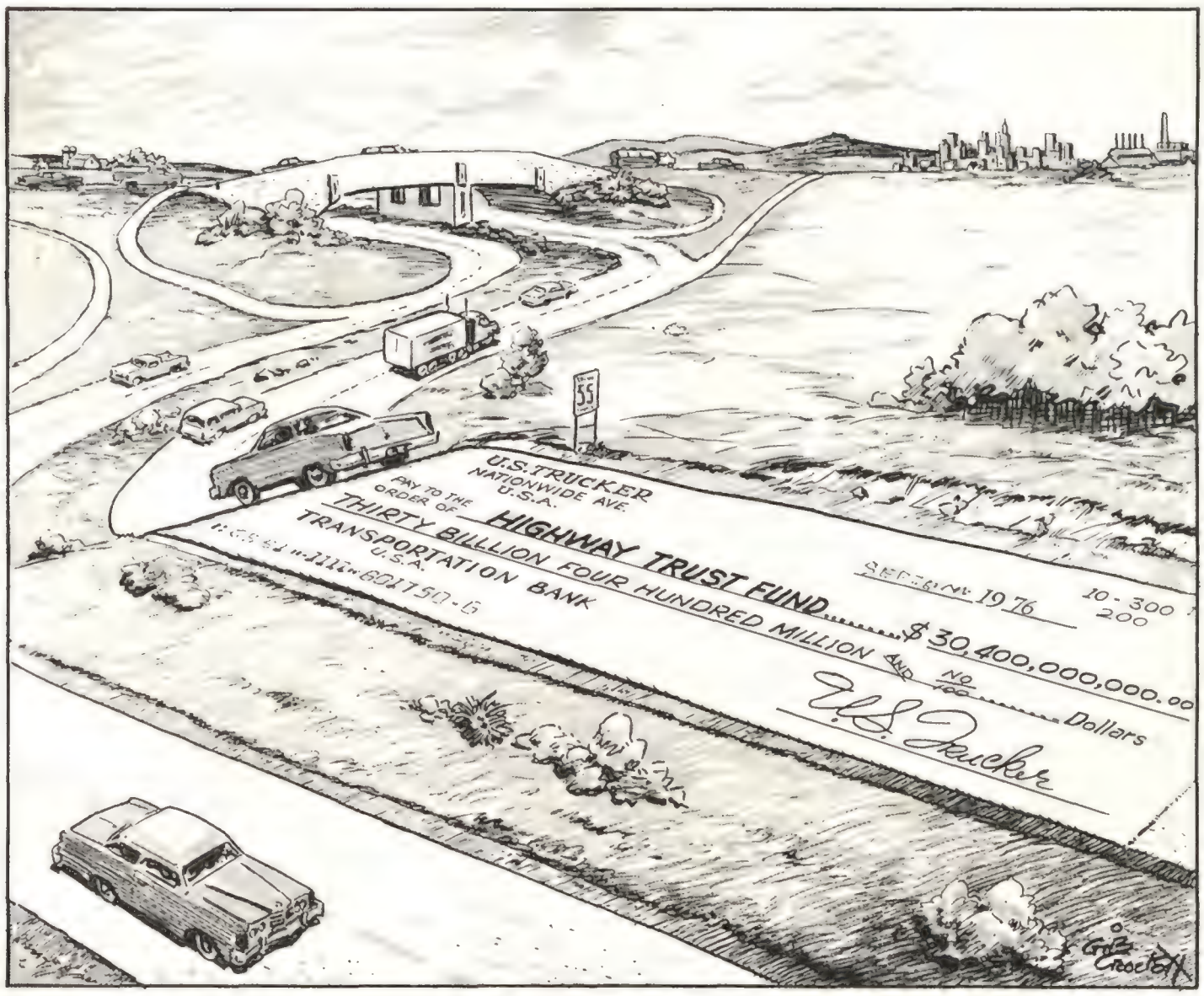

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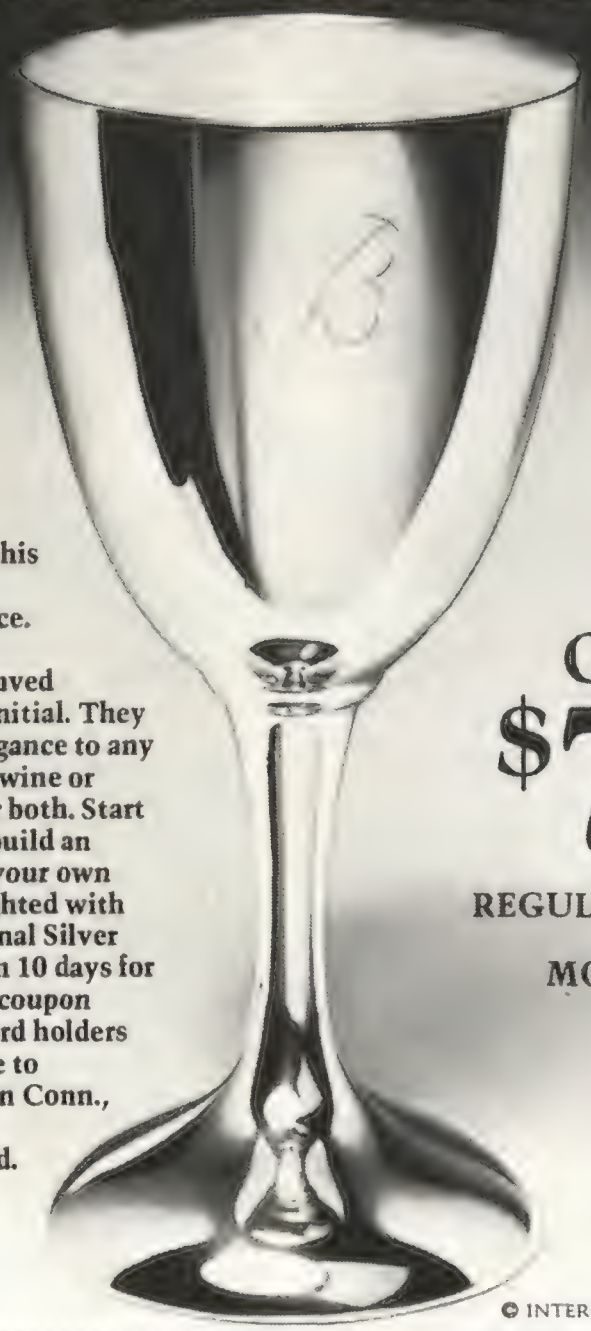

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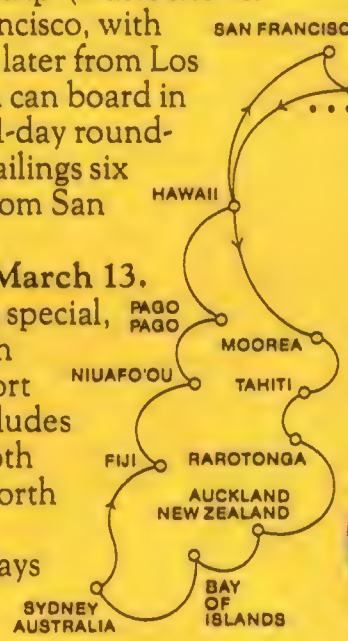

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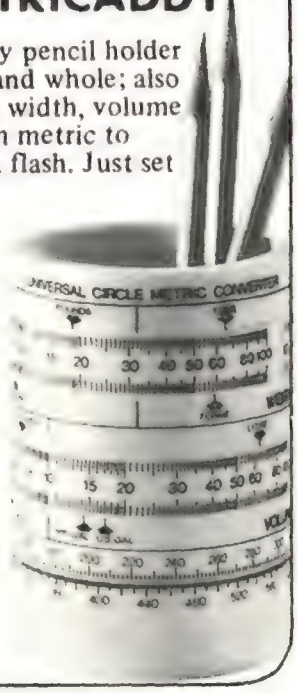

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Smithsonian highlights

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- Inaugurating a new series entitled "The Blues" is Joe Turner, who is considered by many to be the founder of rock 'n' roll. Since his early alliance with boogie pianist Pete Johnson in Kansas City, Turner has recorded "Shake, Rattle and Roll," "Chains of Love" and "Sweet Sixteen." He plays in concert October 3, 8 P.M., Baird Auditorium, Museum of Natural History.
- Max Roach, the master of modern drums, performs in the first "Jazz Heritage" concert of the season, October 10, 4:30 P.M. free workshop, 8 P.M. concert, Baird Auditorium.
- A free demonstration and lecture, "Keyboard Instruments for the Music of C.P.E. Bach," is presented by Dr. J.H. Van Der Meer of the Germanisches Nationalmuseum, Nuremberg, October 11, 8:30 P.M., Hall of Musical Instruments, Museum of History and Technology.

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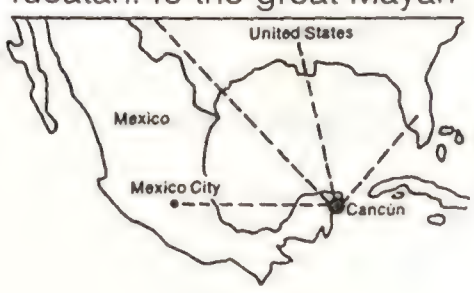

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- Two "Country Guitar" programs feature influential artists Doc and Merle Watson, October 11, 8 P.M., Baird Auditorium, and Merle Travis, October 23, same time and location.
- The first "American Popular Song" concert of the season brings Bert and Sandra Gibson in the "Chocolate Box Review" to the Smithsonian, October 24, 8 P.M., Baird Auditorium.
- Mighty Joe Young, a musician who combines blues with the more lyrical elements of soul, is guest artist of "The Blues" series, October 31, 8 P.M., Baird Auditorium.

Tickets can be purchased at the museum shops or A&I Box Office. Call (202) 381-5395 for information.

Traveling Exhibition Service

For information on bringing an exhibition to your community, write: SITES, Smithsonian Institution, Washington, D.C. 20560 or call (202) 381-6631.

- Athens, Georgia—"Tunisian Mosaics" presents 19 mosaics which decorated the floors of Roman villas from the second through the fourth centuries A.D. (Georgia Museum of Art, through October 17).
- Augusta, Georgia—"A Children's World" is an exhibit of 100 cast-iron and tinplate toys manufactured between 1865 and 1950 (Augusta Richmond County Museum, October 9-November 7).
- Austin, Texas—"Locks from Iran" is the first U.S. showing of more than 150 steel, bronze, gold and silver inlaid locks from the early Islamic period to the 20th century (University of Texas, October 9-November 7).
- Long Beach, California—"Artists, Authors and Others: Drawings by David Levine" (see opposite) presents 51 pen-and-ink drawings of people in the arts by this noted caricaturist. Writers, painters, performers, composers, critics and film makers are among those subjected to Levine's rapier wit (Long Beach Museum of Art, October 2-31).
- Rockville, Maryland—"In Quest of Cockaboody: The Animated Films of Faith and John Hubley" focuses on the work of two talented film makers with a display of drawings, story boards, animated films and background paintings (Montgomery College, October 16-November 14).
- University Park, Pennsylvania—"Antwerp Drawings and Prints" is an exhibition of 145 drawings, prints and albums

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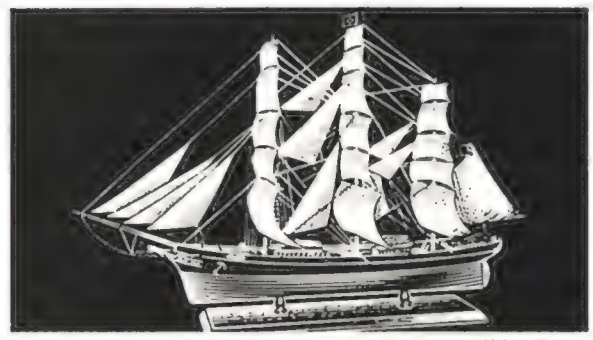

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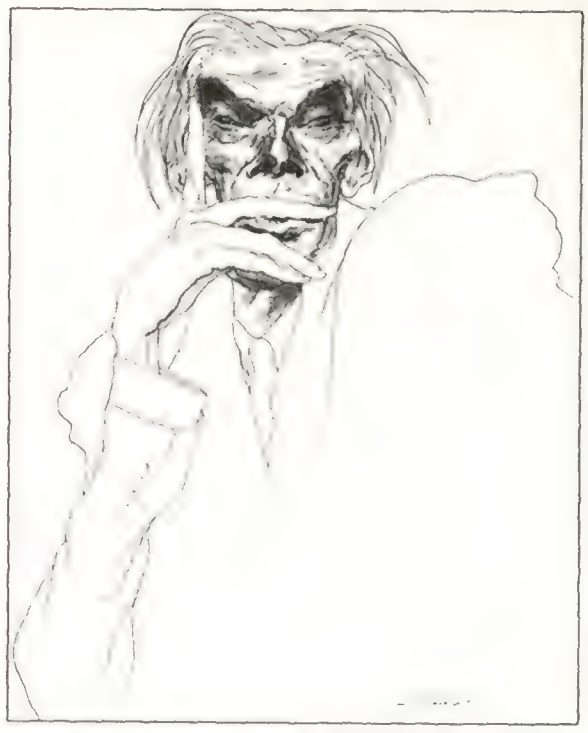

David Levine's *Aldous Huxley* from exhibit currently in Long Beach

from 16th-century Antwerp. Included are works by Jacob Jordaens, Anthony Van Dyck and Rubens depicting subjects of religion, mythology and allegory (Pennsylvania State University, October 2-November 7).

• San Jose, California—"Bridges: The Spans of North America" features photographs by David Plowden, who traveled more than 20,000 miles recording the beauty and function of stone, wood, iron, steel and concrete bridges (San Jose State School of Engineering, October 2-31).

Contributing Memberships

Contributing Members of the Smithsonian Associates support the Institution's work in education, research and scholarship. There are three categories of membership: supporting at $50, donor at $100, and sustaining at $500. Among the special privileges offered to contributing members are:

• illustrated exhibition publications by Smithsonian scholars

• invitations to selected previews of major exhibitions

• the annual report from the Secretary of the Smithsonian

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Travel Benefits for Smithsonian Associates

Three different categories of travel are available to Smithsonian Associates. For a brief description of Foreign Study, Domestic Study and Foreign Charter tours, see the July issue. Tours are announced exclusively in SMITHSONIAN. Write addresses below for additional information about a specific trip.

Domestic Study Tours

Archaeological Field School—October 9-16: Join archaeologists in the excavation of an Illinois village ruin dating to the Mississippian Period (A.D. 900-1400) • **Colonial Williamsburg**—October 24-28: A program planned for adults to learn about life in 18th-century Virginia through tours and special lectures • **Philadelphia Art & Architecture**—November 3-7: Emphasis on the Pennsylvania Academy of Arts and Bicentennial art exhibit; visit the reopened Philadelphia Museum of Art • **NASM Weekend**—November 12-14: Special program with staff to see and learn about new Air & Space Museum • **Tropical Greenery of Puerto Rico**—November 28-December 8: Discover the island's contrasting terrain with guided tours through forest reserves, national parks, coffee plantations and mangrove communities • **Christmas at the Smithsonian**—December 10-12: Fifth annual holiday weekend featuring the newest exhibits, highlighted by a tree-trimming party and dinners in the Arts and Industries "Centennial" Building and the castle • **South Texas Wildlife**—January 22-30: Explore three beautiful and varied wildlife refuges at Aransas, Laguna Atascosa and Santa Ana • **Baja Whale Watch**—February 10-18: Observe gray whales and marine life from San Diego and San Ignacio Lagoon aboard a chartered sportfishing boat; learn about the history of the Baja coast and islands • **Yellowstone in the Snow**—February 25-March 6: Explore this national park by snowmobile coach, learning about the wildlife and geography of the area • **Washington "Anytime" Weekend**—Visit the nation's capital and tour the original Smithsonian building. Spend two nights at Loew's L'Enfant Plaza Hotel (reservations required ten days prior to weekend) • Write Associates Travel Program, A & I 1270B, Smithsonian Institution, Washington, D.C. 20560 or call (202) 381-5635 for information.

Foreign Study Tours

Greater Antilles Cruise—January 3-10: Aboard MTS *Argonaut*, enjoy midwinter sun, rest; architecture and historic preservation in Puerto Rico, Dominican Republic, Haiti and Jamaica, with talks by Dr. Richard Howland and others • **Far East**—February 11-March 7: Singapore, plus a nine-day Indonesian cruise; in-depth tour of art and archaeology in Thailand and a visit to Hong Kong • **Jordan-Holy Land**—March 8-31: Archaeology in Jordan for one week; two weeks of historic sites in and near Jerusalem (accommodations and study at St. George's College) • **Russia**—June 1-22: Emphasizing art history in Georgia and Armenia • **Norwegian Fjord Cruise**—July 31-August 18: Cruise through Norwegian fjords and Baltic on MTS *Argonaut*, including a trip to Leningrad • **The Isles of Britain**—August 19-September 3: Scotland and Great Britain aboard the MTS *Argonaut*. Write Miss Bliss Schumann, Foreign Study Tours, SI 123, Smithsonian Institution, Washington, D.C. 20560 or call (202) 381-5520 for information.

Foreign Charter Tours

Mexico City and Yucatan—January 1-12, February 5-16, November 5-16 or November 19-30: A study program in Mexico City concentrating on Aztec and Toltec cultures; visits to the Mayan ruins of Chichén-Itzá, Uxmal and Palenque (originates in Mexico City) • **Australia and Tahiti**—April 11-May 4: Sydney, Melbourne, Canberra and Papeete; "lifeseeing" seminars and excursions into the countryside; choice of side trip to Great Barrier Reef, or Adelaide overland to Alice Springs, or Tasmania and Southern Australia (originates in San Francisco) • **Istanbul and Asiatic Turkey***—April 18-May 2 or October 10-24: An adventure tour including a five-day program on Byzantine and Ottoman Istanbul, followed by choice of travel seminars to Aegean Turkey, Cappadocia or the southern coast • **Russia***—May 9-23 or October 3-17: The Bolshoi, Moscow Circus, Hermitage; schools, factories and housing in Moscow, Leningrad and Tallinn • **Poland***—May 16-30: "Lifeseeing" and museum seminars in Warsaw; travel seminars to Mazurian Lakes, Gdansk, Malbork in northern Poland or Sandomierz, Zakopane and Cracow in southern Poland • **Paris and Provence***—May 23-June 6, September 26-October 10: Paris plus Avignon, Arles, Nîmes and Aix-en-Provence; museum seminars at the Louvre and Jeu de Paume, walking tours, excursions to the Loire, Chartres and Vaucluse • **The Trans-Siberian Express**—June 7-28: Fly from Seattle to Tokyo for an adventure tour on a steamer to Nahodka and train to Khabarovsk, Irkutsk and Lake Baikal; choice of travel seminars to Samarkand, Bukhara and Tashkent or the cities of old Russia • **Great Britain***—July 25-August 8 or September 16-26: The National Gallery, the British Museum, Tate, Victoria and Albert; London walking tours; choice of excursions to the English countryside; the best of London theater • Low cost of tours includes first-class hotels, most meals, sightseeing, lectures, theater tickets and air fare. Foreign tours are heavily subscribed, so write early for additional details concerning a specific trip to Smithsonian Associates Travel Program, A&I 1270B, Smithsonian Institution, Washington, D.C. or call (202) 381-5635 for information. *Optional predeparture courses will be available for those who are interested.

Hirshhorn Museum and Sculpture Garden

"Hans Hofmann" is the first large exhibit since the Museum of Modern Art's 1963 retrospective of one of this century's major painters. Ten years after Hofmann's death, the show reexamines his work through 75 oil paintings that span his career in the United States from 1935 to 1965. The exhibit opens October 14 in the lower-level gallery.

Air and Space Museum

The new museum is now open to the public (see June and September issues). The Albert Einstein Spacearium presents *Cosmic Awakening* hourly and the NASM Theater presents the film, *To Fly*, every 45 minutes. Parking is available in the museum's underground garage.

Museum of Natural History

The Insect Zoo features six-inch-long rhinoceros beetles, ten-inch-long walking sticks and other creeping, flying delights.

Associates Reception Center

Associates visiting the Smithsonian may obtain a specially prepared Bicentennial packet of information after registering at the Associates Desk in the Smithsonian castle on the Mall. For information in advance of a trip to Washington, write the Associates Reception Center, Smithsonian Institution, Washington, D.C. 20560. For travel information relevant to the original 13 states, write the same address but mark it: "Attention: Museum Reference Service." For telephone inquiries, call (202) 381-6264.

Associates restaurant in the Court

A new restaurant located in the West Court of the Natural History Building is open to Associates for lunch from 11 A.M. to 3:30 P.M. seven days a week. Beer, wine and an ample buffet menu are served in an elegant environment of natural and primitive decorative objects, highlighted by a glass mural of autumn leaves. The Court is within easy walking distance of all the Mall museums.

Fall museum hours

The Smithsonian museums have returned to regular fall hours, 10 A.M. to 5:30 P.M. daily. The Zoo is open from 9 A.M. to 4:30 P.M. and the Anacostia Neighborhood Museum from 10 A.M. to 6 P.M. weekdays and 1 to 6 P.M. weekends.

MARY HOLT AND ROGER BRASHEARS invite you to take lunch at The White Rabbit Saloon, Lynchburg, Tennessee.

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By Patrick Ryan

Pie in the eye is fun—for somebody else

My melancholy feeling that our civilization is regressing has been reinforced by the report that a lady employed at a printing plant in New Jersey had been hit in the face with a custard pie by two women who had established a concern called Pie in the Eye, Inc. Seven of the victim's colleagues had contributed a delivery fee of $35 to commission this barbaric transaction, and mental flags were flown in my locality when she later hit them for $5,000 damages in an out-of-court settlement, and the two pie-throwers were fined $50 each for assault.

While this tends to confirm the Biblical proclamation that "Vengeance is mine; I will repay, saith the Lord," its original cause sends one checking up in Genesis as to just which animal it was that God made in His own image. And further sparks one to wonder just why our current vintage of mankind (particularly in America) should find such unfailing hilarity in a fellow higher primate suffering a facial collision with a custard pie. I find this violent and sometimes food-wasting experience, viewed from the receiving end, essentially humiliating, messy, and costly in dry-cleaning.

It might be that Will Rogers pinned down the eternal appeal of slapstick comedy when he observed that "Everything is funny as long as it's happening to somebody else." No little of our laughter as we watch the comic catch the custard arises from a grateful relief that it's not happening to us. Mutual exchanges of beating between bald-pated, heavily padded clowns were found by ancient Greek and Roman impresarios to be a surefire method of raising belly laughs in their marble-seated auditoriums. Monarchs of the Middle Ages guffawed at the sight of jesters belting gilded courtiers with lard-bladders. The actual slapstick—two laths of wood joined to make the sound of a wallop—came into use in the 16th century in the Italian *commedia dell' arte,* when Harlequin employed it to belabor the rumps of his artless stooges.

In the apocrypha of Hollywood, Mabel Normand, the leading silent film comedienne of Mack Sennett days, has been credited with throwing the first custard pie to be immortalized on celluloid. Mabel, so it goes, was sitting on a bench beside a custard pie that two stage carpenters had brought in with their lunch, as she watched the cross-eyed comic Ben Turpin wrestling with the problem of raising a laugh in an unpromising scene. So, in professional assistance, Mabel picked up the pie and hurled it into Turpin's face. As his off-center eyes emerged from the golden mush, onlookers on the set split their sides and custard pie comedy had arrived.

"We seized upon pie-throwing after that," recalled Mack Sennett, "refined it, perfected its techniques, and presented it to the theater as a new art." (Don't call us, Michelangelo, we'll call you.)

Thenceforth, the soundless cinematic air was thick with flying pies heading for the visage of any character allocated a vestige of authority. Only one great American institution was preserved by the guru. "A mother," said Sennett, "never gets hit with a custard pie. Mothers-in-law, yes. But mothers, never."

Talking pictures came along but the pie-in-the-sky routines went marching on. (Keep your head down, Abbott, and don't forget to duck, Costello.) Countless pies in the early days of television hurtled across screens as latter-day comics stuck for novel gags fell back on the tried Sennett routine. In keeping with the basic artificiality of the medium, there is seldom any real, edible custard—it is usually shaving cream or whipped cream.

And a mark of acceptance of the hysterical gooey flan into the pantheon of human competitive endeavor has been accorded by its current inclusion in the Guinness Book of Records. It is now duly registered that the annual World Custard Pie Championship, instituted in 1967, is held at the improbable venue of the village of Coxheath, in the county of Kent, England. Competitors are esoterically required to hurl a pie of no more than 10¾ inches in diameter at a target face set at a distance of 8 ft. 3⅞ inches, and are awarded six points for a bull's-eye.

Description is not given of the prize, and it can only be hoped that, in simple historical gratitude, the champion receives a cross-eyed silver bust of Ben Turpin with the face heavily splattered in gold, and engraved as representing "The Mabel Normand Memorial Trophy."

Parure. It is a word which is difficult to translate.
One could say "ornament" or "adornment" but one would be missing the point.

It is "ornament" only in the sense of a jeweled tiara from Tiffany's. It is "adornment", but in the sense of an aura, creating a presence which is *felt* more than seen.

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Once again, TV service technicians give these opinions about Zenith:

I. Best Picture.

Again this year, in a nationwide survey of the opinions of independent TV service technicians, Zenith was selected, more than any other brand, as the color TV with the best picture.

Question: In general, of all the color TV brands you are familiar with, which one would you say has the best overall picture?

Answers:

Zenith	**34%**
Brand A	21%
Brand B	12%
Brand C	8%
Brand D	7%
Brand E	4%
Brand F	2%
Brand G	2%
Brand H	2%
Other Brands	2%
About Equal	10%
Don't Know	4%

Note: Answers total over 100% due to multiple responses.

II. Fewest Repairs.

In the same opinion survey, the service technicians selected Zenith, more than any other brand, as the color TV needing the fewest repairs.

Question: In general, of all the color TV brands you are familiar with, which one would you say requires the fewest repairs?

Answers:

Zenith	**38%**
Brand A	18%
Brand D	9%
Brand B	6%
Brand C	5%
Brand E	3%
Brand F	2%
Brand G	2%
Brand H	2%
Other Brands	2%
About Equal	11%
Don't Know	10%

For survey details, write to the Vice President, Consumer Affairs, Zenith Radio Corporation, 1900 N. Austin Avenue, Chicago, IL 60639.

The Celebrity II, Model SH2331X, pictured here. Simulated rosewood with Bermuda Shell white front. Simulated TV picture.

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